

DIFFUSING NURSING THEORY THROUGH NURSING
CONTINUING EDUCATION: KNOWLEDGE, BELIEFS, AND
PRACTICES OF NURSING CONTINUING EDUCATION PROVIDERS

by

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Dissertation submitted to the Faculty of the
Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree of

DOCTOR OF EDUCATION

in

Adult and Continuing Education

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September, 1989

Blacksburg, Virginia

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(ABSTRACT)

Continuing education (CE) is that arm of the nursing educational system charged with the responsibility to disseminate nursing theory to those nurses whose formal education did not include nursing theory. This study examined the extent to which nursing theory was disseminated through CE programs in nursing. Subjects were continuing education providers (CEPs) employed by schools and hospitals who offered state or nationally approved CE programs during the 1987 calendar year. The results of the study were based on responses from 187 CEPs of which 91 respondents (49%) were from schools and 96 respondents (51%) were from hospitals.

Data for the descriptive survey were collected by an investigator developed self-administered questionnaire. The major findings from data analyses follow. CEPs gained

knowledge about nursing theory at all levels of formal education with the majority having nursing theory in the masters program. The usual pattern was to have multiple theories as part of several courses in one formal education program. The respondents were most knowledgeable about nursing theories enunciated by Orem, Roy, Peplau, and Rogers. The respondents perceived that nursing theory was essential for selected nursing functions, nursing practices, and for establishing nursing as a profession. Of all CE programs offered during the 1987 calendar year, the total number of programs without nursing theory slightly exceeded the number of programs that included nursing theory. In those programs, nursing theory was presented most frequently as part of a program for a particular nursing intervention, or as a major objective of a clinical course. Level of knowledge was associated with the number of formal education programs, education, and type of employing agency. Beliefs ascribed to nursing practice were related to formal education and were significantly different when categorized by the number of theory courses and by the number of theories presented. Characteristics of a theory that influenced a decision regarding nursing theory were significantly different when classified by the number of

formal education programs in which one had nursing theory. Significant differences existed in the CEPs' level and sources of knowledge, beliefs, education, and years as a registered professional nurse when categorized according to program type.

Recommendations in the following areas were made for further research and the diffusion of nursing theory: (a) social systems and adoption, (b) program outcomes, (c) expectations for continuing education providers, (d) re-evaluation of nursing theory courses, (e) teaching strategies, (f) instrument validation, and (g) responsibilities of the American Nurses' Association and the National League for Nursing.

ACKNOWLEDGMENTS

The investigator would like to express her appreciation and gratitude to all persons who have made this study possible. The contributions of certain persons warrant special attention.

The researcher recognizes that the project could not have been completed without the able assistance of the advisory committee. Special appreciation is expressed to Dr. Harold W. Stubblefield for chairing the advisory committee and serving as mentor. He truly became a "trusted assessor". His guidance facilitated the process and the completion of the manuscript. Gratitude is expressed to Dr. Marcie Boucouvalas for her efforts in generating the research topic and for continuing her support. The valued services of Dr. Gabriella Belli during instrument development and data analyses are noted. Insights shared by Dr. Norris Bell added clarity to the project. Special acknowledgement is given to Dr. Kathleen Neill for sharing her professional nursing expertise and maintaining her personal support.

A special word of thanks is extended to all the well-wishers among my colleagues at the University of the District of Columbia. The encouragement and support throughout this experience from the Faculty of the Bachelor of Science Nursing Department are gratefully acknowledged. That rapport permitted many useful dialogues that sustained and facilitated the completion of this study.

DEDICATION

This manuscript is dedicated to my family -- to my husband and son for all that they have endured while freely giving, to my brothers and sisters for continuing to believe that I would succeed, and lastly, to the memory of my parents for their love of education, thus, the beginning.

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CHAPTER 1

INTRODUCTION

Description of the Problem Situation

Nursing in the United States is a regulated human service governed through state and national legislation. The enacted legislation reflects the public's views about health and health care providers. The regulatory powers of states require a state to define the practice of nursing and the legal qualifications of persons who engage in nursing. Therefore, society through its legislation ascribes the status, the roles, and the responsibilities of nursing. Changes in the public's views about health and health care providers alter both the education for and the practice of nursing.

According to the National Commission for the Study of Nursing and Nursing Education (Lysaught, 1970), society has defined nursing practice as a vocation, an occupation, and as an emerging profession. The public views about nursing reflect the antecedents of nursing. Those publicly held views have shaped nursing education.

Nursing evolved from the concept of nurturing first demonstrated in ancient times by the women within a family

or their servants who cared for family members (Dietz, 1963; Dolan, Fitzpatrick, & Herrmann, 1983; Lewis, 1987). Between A.D. 1 and A.D. 500 (circa) the concept of caring was extended from the family to others by religious groups. This extension of caring to others is attributed to the influence of Christianity which emphasized the value of human life and brotherhood. Christianity also provided a cultural milieu for single women to pursue active careers. Women, both individuals and members of religious orders, provided care to infants and children, the ill and infirm, and to the destitute. Those nurturing activities laid the foundation for modern nursing as a caring service to others (Dietz, 1963; Dolan, Fitzpatrick, & Herrmann, 1983; Lewis, 1987).

The Christian influence prevailed and was transmitted from Europe to this country (Dietz, 1963; Dolan, Fitzpatrick, & Herrmann, 1983; Lewis, 1987). It was the impetus for the establishment of hospitals in the 1700s. However, no one was educated to practice nursing. The pioneering work of women in their care of Civil War wounded led to the education of nurses. Following the Civil War, hospitals increased in numbers, which created the need for

establishing nursing as a life-work for women. In turn, hospitals became institutions for the training of nurses (Dietz, 1963; Dolan, Fitzpatrick, & Herrmann, 1983; Lewis, 1987).

The vocational view of nursing practice extended the nurturing roles of women to the workplace (Lysaught, 1981; Meleis, 1985). In this view, nursing practice consisted of comfort measures and hygienic care. As physicians employed nurses and assigned components of medical practice to nurses, nursing practice became dominated by physicians. They had the legal authority to control practice and to delegate aspects of their medical domain to nursing. The process of delegating tasks to nurses produced a nursing educational system controlled by physicians (Goodnow, 1953; Roberts, 1954). The physicians owned the hospitals, defined medical practice components for nurses and then determined the content necessary for task performance. Both the meaning of nursing and its scope of practice were derived from the specialty of the physician (Roberts, 1954). The vocational view of nursing practice continued and resulted in an occupation whose knowledge base, identity, and scope of practice were perceived as extensions of physicians

(Goodnow, 1953; Lysaught, 1981; Meleis, 1985; Povalon, 1980).

The occupational view of the early 1900s expanded nursing from that of nurturing to organizational tasks. As medical care became more complex, nursing continued to accept other physician delegated tasks and to assume supervisory and administrative roles for other health care providers (Lysaught, 1981). Those supervisory and administrative roles resulted in role confusion and further obscured the meaning of nursing, its scope of practice, and the education required (Lysaught, 1970, 1981).

The occupational status of nursing brought two significant educational changes: the creation of formal programs in nursing education and institutional changes that offered nursing education. It moved from apprenticeships in physician owned hospitals to other proprietary hospitals and in 1923 moved into colleges and universities (Goodnow, 1953).

Content for nursing, however, continued to be extracted from the same scientific base as that required for medicine. The difference between medical and nursing education occurred primarily in depth and breadth (Chinn & Jacobs,

1983). Moreover, the content perpetuated the linkage between medicine and nursing without differentiating medicine from nursing (Chinn & Jacobs, 1983; Fawcett, 1983; Lysaught, 1981).

In that context, whereby nursing added other delegated functions to its repertoire, accretion determined both the knowledge base and the nursing practice required (Orem, 1987; Parse, 1987). Additionally, both the vocational and occupational views of nursing practice supported an educational process of conformity, the learning of tasks, and paternalism (Lysaught, 1981; Meleis, 1985). The emergent nursing educational system lacked autonomy, its own identity, and its own body of knowledge (Fawcett, 1980; Lysaught, 1981; Meleis, 1985).

Progress towards professionalism is dependent upon nursing education. It has been embedded in the persisting vocational and occupational views of nursing practice. Therefore, the legacy of nursing's dependency upon the medical model continues. However, nursing's dependency is being challenged by emerging views about health care and its management.

Since the 1970 Commission's report described the public views of nursing practice as a vocation, an occupation, and as an emerging profession, three other movements are impacting upon health care management. These movements which question both the education for and the practice of nursing are (a) the wellness movement, (b) the "corporatization" of the health care delivery system, and (3) the feminist movement.

The wellness movement is forcing a paradigm shift in the focus and the delivery of health care. The focus is changing from illness to wellness and health promotion (Hall & Allen, 1986). Additionally, health care management is shifting from the providers of care to consumers of care (Andreoli & Musser, 1985). Changes in focus mandate that nursing be more than the acquisition of tasks. Consumerism also suggests role change and implies that nursing has a responsibility for care even though the act may be performed by others.

The health care delivery system is changing from a system dominated and owned by physicians to health care delivery centers owned by national and international corporations (Aydelotte, 1987). Aydelotte (1987) reported

that 50 percent of the practicing physicians are employed by corporations. The relationship to one another changes now that physicians and nurses share the same employers. The corporate structure determines when and where nursing is practiced. In this milieu, it is expected that consumers will be given options for health care. Furthermore, it is expected that professional nurses will collaborate with patients and other health care providers for the required management of health problems (American Nurses' Association [ANA], 1980). This relationship requires nursing to become a full partner in the delivery of health care. In a partnership, nursing has a valued independent service to offer. Such restructuring obviates paternalism in nursing. Also, the corporate system challenges nursing to articulate its service so that nursing's position in health care delivery can be established. It is believed that explicating nursing theory will enable nursing to define its service (Aydelotte, 1987; Lysaught, 1981).

The feminist movement is facilitating nursing theory development by dispelling myths about sex role stereotypes and intellectual inferiority of women. Removing those barriers has enabled nurse theorists and their works to be

recognized by academe and by the nursing community (Meleis, 1985). This recognition and subsequent approval has the capacity to change both the education for and the practice of nursing. It sets the stage for nursing to advance towards professionalism (Fawcett, 1980, 1983; Lysaught, 1981).

Support for nursing practice as an emerging profession has been gaining momentum since the 1950s (Lysaught, 1981) and has peaked during the 1980s (Meleis, 1985). Toward that end, nursing is reshaping its education and practice through nursing theory development. It began in this country in 1952 with Peplau's (1952) interpretation of nursing as a therapeutic interpersonal relationship between nurse and client. Since the writings of Peplau, seventeen other nursing theories have been acknowledged (Fitzpatrick & Whall, 1983; Meleis, 1985; Torres, 1986).

Nursing theories are necessary to separate nursing from medicine (Chinn & Jacobs, 1983; Orem, 1985). Nursing theory presents a view of, or explains, the phenomena of interest. From that theoretical view, nursing distinguishes its focus and purpose from that of medicine and identifies its area of sole responsibility. Additionally, with the formulation of

nursing theories, the focus of nursing changes from task orientations to the reactions and concerns of persons to actual or potential health problems (ANA, 1980). The ANA (1980) maintains that "nursing practices are nurturant, generative, and protective in nature...." (p. 18). Nurses diagnose and treat actual or potential health problems for each type of practice. These nursing practices may require direct care, may assist persons in learning adaptive behavior, or may provide for the surveillance of persons with illness (ANA, 1980). Nursing theory is necessary for each type of nursing practice to aid in the diagnosis of nursing problems and to guide the nursing action(s). From research generated from the nursing theories utilized for these practice areas, nursing is defining its essence, is clarifying its practice domain, and is defining its substantive knowledge (Fawcett, 1984; Meleis, 1985; Parse, 1987; Silva, 1986).

The identification of its own substantive knowledge gives nursing a common language to articulate its service to others (Meleis, 1985). Also, the substantive knowledge gives nursing a power base as an expert to gain control of its independent realm of practice and to achieve autonomy

(Chinn & Jacobs, 1983; Meleis, 1985). Furthermore, the emerging substantive knowledge satisfies that valued criterion for a profession (Fawcett, 1980; Lysaught, 1981; Meleis, 1985). That component of professionalism is essential for nursing to become a bona fide partner in the delivery of health care. Also, it is necessary for nursing to accept its social mandate to define its social worth (ANA, 1980; Lysaught, 1981).

In summary, concerns about health care are reflected in legislation. As groups change the requirements change. Several interest groups are challenging the nature of nursing, its focus and purpose, and its dependence on the medical model.

To facilitate change in the practice of nursing, in 1981 the ANA issued a policy guide for the regulatory changes of a nursing practice act (ANA, 1981). The policy statements were prompted by interest from the Council of State Governments and the ANA. Both groups were troubled by the laws that govern professions (ANA, 1981). Particular issues of the ANA were the extended scope of nursing practice and the overlap with medical practice, as well as nursing's responsibility to society to advance the

profession and to develop nursing theory (ANA, 1981). Those issues were addressed in the suggested definitional change in the practice of nursing stated in the policy guide. Significant language changes in the definition are the inclusion of "diagnosis" and "nursing theory." Nursing diagnoses require substantial knowledge in the biopsychosocial sciences and in nursing theory as the basis for assessment, diagnosis, planning, intervention, and evaluation of care (ANA, 1981). Knowledge from the biopsychosocial sciences is required for the surveillance of persons with illness and the collaborative functions of nursing. Nursing theory is required to separate nursing functions from those of other health care providers and to guide the diagnosis and care required for managing reactions and concerns to actual or potential health problems.

Statutory changes have endorsed the ANA's policies. Nursing diagnosis or a related term has been added to the nursing practice act by 22 states (La Bar, 1984). Four states (La Bar, 1984, 1985) have included nursing theory and two states (La Bar, 1984, 1986) have included nursing science as the basis for nursing diagnosis. The courts also have begun to recognize that nursing has a specialized

knowledge separate from physicians and separate from the caring services rendered by the lay public to family and/or friends (Murphy, 1987).

Continuing dependency on the medical model will not permit nursing to make the transition to an independent realm of practice. Such dependence reinforces the prevailing model of health care management. It fails to acknowledge societal changes that are asking nursing to define its domain of practice (Lysaught, 1981; Meleis, 1985; Parse, 1987) and to define its social worth (Aydelotte, 1987; Lysaught 1981). To break the dependence on the medical model, nursing education must change. It must accept that nursing has an independent realm that can be defined through nursing theory development and its subsequent utilization. Nursing must be reconceptualized as a specialized body of knowledge in a specific field. Nurses then may offer an independent service of nursing practice to society (Farnham & Fowler, 1985; Glick, 1985).

Socialization for nursing practice is vested in the educational system. The ANA (1976, 1979, 1984) defines nursing education as basic, graduate, and continuing education (CE) and stipulates that each component is

"equally important...[for] the advancement of the profession..." (ANA, 1984, p.3). Only nurses educated at the baccalaureate or graduate levels are educated to utilize nursing theory (ANA, 1987; National League for Nursing, 1983).

Continuing education (CE) is that component of the nursing educational system responsible for maintaining competency in practice. CE is the link between the requirements for practice and one's formal preservice and graduate education.

The utilization of nursing theory is a new approach to health management. If one's preservice and/or graduate education did not include nursing theory, CE is responsible for educating nurses for the new approach to nursing. The specific charge to CE for nursing theory is set forth in the ANA standards of CE (ANA, 1976, 1979, 1984).

Given that the majority of practicing nurses have been educated at the technical level, diploma or associate degree preservice programs, nursing theory was not expected in their basic preparation (ANA, 1987). CE then is the primary source of information about nursing theory to the present practitioners of nursing. CE thus becomes the major link

for the diffusion of nursing theory and its implementation in nursing practice.

The past decade has produced an abundance of literature in general about CE. The literature endorses lifelong learning and andragogy, and describes all phases of CE program design from needs assessment through evaluation. Research studies have investigated motivations for CE, learner characteristics, and have measured outcomes from CE. Perceptions about mandatory versus voluntary CE for relicensure have also been described. CE program offerings have dealt with curriculum and instruction, leadership and administration, state association concerns, media development, as well as clinical sessions for specific illnesses and the technologies for their management. There is, however, a paucity of literature that describes outcomes of nursing theory based practice. Such literature states that CE was required for the implementation of a nursing theory in a nursing practice setting (Allison, 1985; Capers, O'Brien, Quinn, Kelly, & Fenetry, 1985; Mastel, Hammon & Rogers, 1982; Schmieding, 1984). Continuing education providers (CEP) have a responsibility for knowledge diffusion. The extent of CE's involvement in nursing theory

is not known. The degree to which CEPs fulfill the requirement for diffusing nursing theory is not documented. Furthermore, a paucity of information about CEP's knowledge, beliefs, CE practices related to nursing theory and the reasons for not including nursing theory exists in the literature.

Statement of the Problem

Social and legislative changes are impacting upon the health care delivery system that challenge the nature of nursing, its focus and purpose, and its dependence on the medical model. For nursing education and nursing practice to move towards professionalism, nursing must break its dependency upon the medical model and define its own domain of practice. Many nurse-scholars believe that nursing theory which defines the body of knowledge and enunciates the area of sole responsibility for nurses enables the practitioners of nursing to make the transition to an independent realm of practice. However, to accept that new dimension of nursing practice nurses must be educated to utilize nursing theory in practice settings.

Continuing education (CE) in nursing is that arm of the nursing educational system directly responsible for maintaining competencies of nurses in the workplace. Knowledge about nursing theory and its application to nursing practice depends in large measure on the efforts of continuing education providers in diffusing nursing theory to those nurses in the practice arena.

The problem addressed by this study was the extent to which nursing theory was disseminated through continuing education programs in nursing during the 1987 calendar year, the knowledge about nursing theory, beliefs about the importance of nursing theory, and practices related to nursing theory of selected continuing education providers.

To that end, the following is the major research question: To what extent do selected continuing education providers (CEP) address nursing theory in continuing education (CE) offerings, and what factors are associated with decisions about nursing theory for CE offerings?

The following questions guided the study.

1. What is the nature of the background and knowledge of CE providers with respect to nursing theory?

2. What are CE providers' beliefs about the importance of nursing theory?

3. What are the CE providers' practices with respect to the implementation of nursing theory?

4. Are there any relationships between a CE provider's level of knowledge, beliefs, and practices related to the sources of knowledge with respect to nursing theory?

5. Are there any relationships between various aspects of CE providers' knowledge, beliefs, or practices and their demographic characteristics (i.e., education, type of employing agency, and experience)?

6. Are there any differences in the knowledge, beliefs, and demographic characteristics between CE providers who provide nursing theory and those who do not?

7. What reasons do CE providers give for not including nursing theory in their program offerings?

Definition of Terms

For the purposes of this study, the following terms apply.

1. Nursing - the deliberate action taken to provide a social service to persons who lack the capacity to act on their own behalf for health related reasons.
2. Continuing Education - the formal noncredit course offering that builds upon or extends some prior knowledge or experience for the improvement of nursing practice exclusive of short courses that are specific to a particular institution.
3. CE Providers - (theoretical definition) persons who organize, plan, evaluate and sponsor continuing education programs in nursing.
CE Providers - (operational definition) persons or agencies who offer approved CE programs in nursing. Approval is granted by the ANA, state nurses association or state board of nursing.
4. Nursing Theory - set of concepts and propositions defined by nurse theorists that explains that part of health care delivery that is legally controlled and performed by persons educated to practice nursing and that part which separates nursing roles and responsibilities from those of other health care providers.

5. Diffusion - (theoretical definition) the transmittal of a new idea from the source to another individual who lacks information or knowledge.

Diffusion - (operational definition) deliberate action taken by CE providers for the intended spread of nursing theory.

Significance of the Study

Historically, continuing education in nursing has been responsible for disseminating new information that impacts upon nursing practice to nurses in the workplace. Nursing theory is an innovation that must be disseminated to the majority of nurses in nursing practice for nursing practice to change. The study was significant in that it investigated the knowledge, beliefs, and practices of selected continuing education providers with respect to the diffusion of nursing theory. The obtained information described the extent to which nursing theory was disseminated through continuing education programs. Additionally, the results of the study depicted the perceived importance of nursing theory towards nursing functions, nursing practice and to nursing as a profession

for selected continuing education providers. Such information should be useful to the nursing educational system and to the nursing community in their endeavors to transmit nursing theory to the general population of nurses in the practice setting.

Secondly, results from the study indicated relationships and differences among the various aspects of continuing education provider' knowledge, beliefs, and practices with respect to nursing theory and the demographic variables of education, type of employing agency, and experience. Such information should be useful to the nursing community in evaluating the role of continuing education providers in different settings for diffusing nursing theory.

Next, the findings from the study should add to the emerging literature regarding the implementation of nursing theory in nursing practice. The results identified the present status of selected continuing education providers in their response to requirements from nursing and from consumers of nursing to change the practice of nursing from the medical model to an independent realm of practice.

Finally, information from the study identified reasons that selected continuing education providers omit nursing theory in their program offerings. The identified information suggest planning issues or variables for consideration whenever those continuing providers expand their program offerings to include nursing theory.

Limitations of the Study

The exploratory nature of this study which utilized an investigator developed instrument that was validated for content validity limits the accuracy of the instrument to that one factor of validity. Another limitation to this study was related to the sample. The first sample limitation was its voluntary nature. Only those states that could voluntarily provide a listing of approved continuing education providers were included. A second limitation to the sample was that it included only continuing education providers approved by the American Nurses' Association, state nurses' associations, and state boards of nursing, thus, other providers were excluded. Finally, some approved providers by these agencies were omitted because they were not listed in current listings of hospitals by the American

Hospital Association or in the current edition of the College Blue Book of colleges and universities. These limitations restrict the generalizability to other populations.

Organization of the Study

Following this introduction, Chapter two presents a selected literature review regarding (a) knowledge diffusion, (b) nursing continuing education's response to innovations within the existing health care delivery system, and (c) nursing theory to explain the process of linking an innovation to the practice setting. Chapter three describes the research design, the population and sample, the instrument, and data collection. Chapter four outlines the results of data analyses and findings related to the research question. Chapter five includes the summary, conclusions, and recommendations resulting from the study.

CHAPTER 2

REVIEW OF THE LITERATURE

This chapter presents a review of the relevant literature regarding (a) knowledge diffusion, (b) nursing continuing education's response to innovations within the existing health care delivery system, and (c) nursing theory. Three general questions guided the literature review:

1. How is new knowledge linked to the practice setting and what conditions are necessary for the diffusion and adoption of new ideas?
2. How and in what ways has continuing education in nursing been an agent for planned change?
3. How and in what ways have nursing theorists described nursing and what issues have nursing theories confronted during nursing theory development?

Knowledge Diffusion

Dissemination of knowledge from production to utilization requires a series of actions related to the linking process, diffusion, decision making, and change

agents. These components interact and govern the flow of information from its source to a target audience of potential users.

The literature describing the process for linking knowledge to practice has been summarized by Glaser, Abelson, and Garrison (1983) in their book Putting Knowledge to Use. In their view, the social utility of new knowledge is to improve an existing situation. Knowledge, a new product, idea, procedure, or action plan has to be transmitted in a usable form from its source of origin to the situation and persons to be benefited for change to occur. The authors concluded that planned change was the mechanism for linking knowledge to practice.

Linking Knowledge to Practice

From their literature review, Glaser, Abelson, and Garrison (1983), identified three areas that affected the transmission of knowledge for changed practice. The areas were (a) determining factors, (b) planned change, and (c) linkages.

The determining factors are the multiple variables that arise from a variety of sources that act singly or in

combination to influence change. Their presence affects the innovation's capacity to bring about change. Commonly identified variables arise from the following areas: the innovation, psychosocial characteristics of individuals and organizations, and the manner and extent of dissemination. Change agents use information about the determining factors "as a procedural tool for (1) assessment of the organization's readiness to adopt a proposed change, (2) identifying factors affecting successful adoption that may need to be attended to before any adoption attempt, and (3) guiding the implementation process" (Glaser, Abelson, & Garrison, 1983, p. 4). The significant variables give direction and focus to change agents as they institute planned change.

Opposition to change is a special concern related to the determining factors during the adoption process. Resistance arises from the perceived threats and/or losses experienced by potential users of the innovation. The change process must include strategies to reduce resistance for adoption of new knowledge to occur.

Planned change is a process with multiple stages which interact and influence progression from one stage to another

stage. During the process of planned change, the linking agent addresses the significant variables and their anticipated outcome for each stage and tailors the identified determining factors to the situation at hand through selective strategies or action plans for each stage.

Several models describe stages within the change process. All participants, whether they are knowledge producers or knowledge users, engage in similar thought processes and activities. The authors concluded that all models were variations of the problem-solving approach and consisted of common elements: (a) needs awareness, (b) diagnosis and clarification of the problem, (c) obtaining pertinent knowledge, (d) weighing alternatives, (e) planning and implementing change strategies, and (f) evaluation and follow-through.

The purpose of a change strategy is to help potential users be more receptive to and knowledgeable about an innovation. Implicit in change strategies is the element of control. The strategies cited by Glaser, Abelson, and Garrison (1983, pp. 214-219) indicated that the control ranged from equal sharing among all parties involved to vesting control in an individual or group. Thus, attention

should be given to strategies regarding (a) the perceived active or passive roles of knowledge transmitters and knowledge receivers, (b) the execution of the previous stage(s) in the change process, (c) the appropriateness of the strategy for the stage involved, (d) the objective of the change process whether it be for a particular change or a different view towards problem solving, and (e) the latitude to modify the plan as new circumstances emerged.

As a final consideration, Glaser, Abelson, and Garrison (1983, p. 419) offered four guidelines for persons considering planned change activities. Consideration should be given to (a) context or circumstances, readiness, and resources, (b) awareness or perceptions of persons involved, (c) communication networks, and (d) the means to sustain interest and support of potential users.

Glaser, Abelson, and Garrison (1983, p. 255) concluded that the ultimate task in linking knowledge to practice was joining user systems with resource systems. That aspect of planned change requires linkages. They are explained by the diffusion process, the innovation-decision model, and change agents.

Diffusion

The process of getting a new idea adopted has been the research focus of empirical studies from several disciplines (Rogers, 1983). From that body of literature, Rogers has summarized the research findings, described diffusion, and presented a model which characterizes the stages of an individual's decision-making when confronted with a stimulus for change. Rogers's book, Diffusion of Innovations, is currently in its third edition and is a standard treatment of the subject.

Diffusion is a special kind of communication which has as its message new ideas. The purpose of diffusion is social change which would result from the response of individuals, groups, or organizations to a new idea. Diffusion theory explains how individuals change their behavior as a result of communications with another individual(s). Rogers (1983, pp. 17-18) contended that because interpersonal networks are fundamental to behavior change, information exchange is essential for diffusion. Diffusion entails the spread of information within and between social systems and is essentially an "uncertainty-reduction" process which eliminates some of the perceived

risks associated with choices to be made relative to the new ideas. Diffusion is composed of four essential elements derived from social change and communication theories: (a) an innovation, (b) communicated through channels, (c) in a social system, (d) over time. The first element, innovation, refers to an idea, practice, or object that a potential adopter perceives as new. Communication channels, the second element, are the medium of information exchange which connects persons possessing information about the innovation with potential users. The third element, a social system, represents the membership and organizational structure of various groups or interrelated units working to achieve a common goal. The fourth element, time, reflects the elapsed time from an individual's first knowing about a new idea until its adoption.

In summary, the elements describe the diffusion process. Each element generates factors that govern the diffusion course of information spread throughout a social system. Communication channels establish the requirement for linkages. The associated uncertainty emerging from the diffusion process necessitates planned change to facilitate information flow between user systems and resource systems.

Involvement in and choices made towards diffusion are related to uncertainty reduction. The innovation-decision process is the means to reduce uncertainty.

Innovation-Decision Model

The existence of new knowledge per se lacks the capacity to influence. It must be evaluated and assimilated by individuals or groups for change to occur. How a person decides on the merits of an innovation and its applicability to a situation involves a series of mental activities, action plans, and choices over time. Rogers (1983, p. 163) maintained that individuals engaged in information-seeking and information-processing activities to reduce the uncertainty associated with an innovation and its adoption. These events are the innovation-decision process which has five stages: (a) knowledge, (b) persuasion, (c) decision, (d) implementation, and (e) confirmation.

Knowledge Stage. The knowledge stage consists of the cognitive activities employed by an individual to learn about or to be informed about a new idea. The stage begins with an individual's first knowing about or exposure to the existence of an innovation and concludes with an

individual's efforts to gain understanding about the new knowledge. Three types of knowledge are related to the "software" components or knowledge about an innovation. Awareness knowledge treats the "what" questions of an innovation. How-to knowledge explains the operations of a new alternative. Principles knowledge explains the rationale thereby directing the proper application of an innovation. Individual's remain at the knowledge stage until they receive sufficient information to perceive a benefit.

Persuasion Stage. The persuasion stage primarily deals with the affective domain or feelings and is the time for attitude formation. The new attitudes toward the innovation are influenced by (a) "selected perception", the tendency to interpret a message in accordance with an individual's existing beliefs, (b) an individual's interactions with known and potential users, and (c) the characteristics associated with the innovation. Persons are more likely to be favorably disposed toward innovations that demonstrate the following characteristics: (a) relative advantage, (b) compatibility, (c) complexity, (d) trialability, and (e) observability. Relative advantage is the extent that a new

idea is perceived by the potential user as better than the existing situation. Compatibility is the congruence between beliefs and those inherent within the new situation.

Complexity refers to the ease of assimilating the information required to utilize the innovation.

Trialability represents the opportunity to engage in pilot projects before extending the usage to the total group.

Observability refers to the visible results or outcomes perceived by potential users.

Attitudes formed about an innovation result from interpersonal interactions. Individuals use "social reinforcement" to share, to clarify, and to validate their developing attitudes. Attitudes formed about an innovation determine its future course.

Decision Stage. The decision stage includes an individual's activities that lead to determinations for further actions. Two outcomes are possible: acceptance or rejection. Acceptance constitutes adoption, the decision to use an innovation. Toward that end, evidence is sought from trials with an innovation, discussions with other users of the innovation, or from other persons with similar experiences. Rejection is the choice to decline adoption.

Because the previous stages of knowledge and persuasion continuously interact with the decision stage, decisions to accept or reject an innovation may be altered. The intent to adopt may be discontinued when additional evidence is gained; conversely an intended rejection may be reversed for adoption.

Implementation Stage. This stage represents the specific actions required to achieve adoption of new knowledge in a particular setting with its unique target audience. At this time the change agent and the potential users collaboratively modify and adapt the new alternative to the requirements of the setting and the potential users.

Confirmation Stage. The confirmation stage is the time for making final decisions. At the confirmation stage persons resolve the remaining uncertainty associated with the innovation. They seek reinforcement and evaluation of the usage to determine its effectiveness in the new situation. Dissonance, the internal disequilibrium or lack of agreement about the new alternative among the new users, must be reduced for continuance of the innovation. Failure to reinforce for dissonance reduction results in rejection of an adopted innovation.

The two types of rejection are discontinuance and replacement. Discontinuance is the decision to stop an implemented adoption because of dissatisfaction with the intended outcomes; replacement is substitution with another alternative. Whenever an innovation fails to improve a situation, a final decision regarding the innovation is made.

In summary, the innovation-decision model describes the mental activities and sequence of events that an individual makes when selecting an answer to a stimulus for change. It involves cognitive changes, attitude changes, and actions. Those elements are influenced by antecedent factors, for example, personal characteristics. Response to an innovation requires the identification of those intrinsic components. The process is facilitated by change agents.

Change Agents

The transmission of an innovation within and between social systems requires that linkages--communication channels--be established between client system and change agency. A client system is the target audience of practitioners who are the potential users of an innovation.

Change agency (resource systems) represents those persons who hold expert knowledge about the innovation. Such resource persons may be a part of the existing social system or be external to the system. A change agent is an intermediary force who joins together the two social systems (Glaser, Abelson, & Garrison, 1983, p. 255; Rogers, 1983, p. 313). Change agents are required because of the social and technical differences between the change agency, or expert, and the client audience of practitioners, potential users. Change agents are individuals who use their skills and abilities to influence the client system and to facilitate the flow of an innovation from a change agency to a client system.

Change agents perform many roles and these roles differ at the various stages of the innovation-decision process. During the knowledge stage of the innovation-decision process, change agents create awareness. In the persuasion stage change agents provide opportunities for potential users and known users to share experiences to facilitate attitude formation. At the decision stage change agents present demonstration trials with the innovation to potential users. At the implementation stage, change agents

provide technical assistance. At the confirmation stage, change agents provide support to the client audience who has adopted the innovation.

In their efforts to influence persons to adopt innovations, change agents may be called upon to perform the roles of (a) conveyor, (b) consultant, (c) trainer, (d) leader, (e) innovator, (f) knowledge-builder, (g) defender, (h) gatekeeper, (i) strategist, (j) collaborator, and (k) manager.

The change agent continuously utilizes the innovation-decision process to institute planned change for linking knowledge to practice. In performing the various roles, change agents make both formal and informal action plans and use communication channels, which includes interpersonal and mass media, in order to tailor the innovation to the system with its existing circumstances.

Continuing Education's Response to
Innovations for Nursing Practice

Continuing education (CE) is the subsystem that links nursing practice to other units within the health care delivery system for educational purposes or knowledge

utilization. Throughout the development of nursing and the evolution of CE in nursing, innovations have come from different sources. Nursing has been the recipient of delegated tasks and responsibilities from the medical profession and from society through legislation. Those needs have influenced continuing education providers (CEP) in their choice of innovations to be disseminated. Continuing education has been the principle agency of knowledge diffusion to nurses in the workplace. Demands for new information have come from (a) deficits in basic education, (b) new knowledges and technologies from the supporting disciplines which have changed the required nursing management, (c) legislative changes that required specialization and added responsibility to nursing for the care and management of persons with particular life-threatening illnesses, (d) crises in manpower, and (e) extended scope of nursing practice.

Deficits in Basic Education. One area in which CEPs have been responsive is in deficits in basic education because of the structure of preservice education. Preservice education evolved from the apprenticeship model to a bi-level system of technical and professional nurses.

In that division, each level was expected to perform separate roles and functions (Bensman, 1977). In practice, these outcomes have not materialized; graduates from each of the preservice programs perform the same roles and tasks. Dennis and Janken (1979) and Jacobs (1980) found that graduates from each of the preservice programs have been ineffective in their performance of certain basic nursing skills, decision making, patient education, and leadership abilities.

Supporting Disciplines. A second area in which CEPs have diffused new knowledge is in the supporting courses that form the educational base for nurses. As a practice discipline, the content of nursing education to equip nurses for the surveillance of persons with illness came from the medical model which has been eclectically selected from the biopsychosocial sciences. Expanded knowledge and the subsequent technologies in any of these disciplines means that preservice curricula must be updated and the new knowledge and technologies disseminated to nurses in practice. Obsolescence, therefore, is a constant threat to the education of nurses because of the rapidity of change in

the supporting disciplines (Bush & Lewis, 1978; Cooper & Hornback, 1973; Lee, 1971; Puetz & Peters, 1981).

Specialization. A third area in which CEPs have been responsive is in the utilization of technological innovations that requires particular expert knowledge. For example, diagnostic and treatment modalities for myocardial infarction, this nation's leading cause of death, has significantly improved since the 1960s. Important factors in the management of myocardial infarction have been the delegation of a medical function, detection of dysrhythmias from electrocardiograms to nurses, and the education of nurses to assume that role. Other technological innovations have been added to the armamentarium for other diseases which require special knowledge.

Crises in Manpower. A fourth area in which CEPs have been responsive is to crises in manpower. The health care delivery system has experienced several crises in manpower: shortages in kind, actual numbers of nurses available, and the number of nurses prepared to adequately care for persons with specific illnesses (Cooper & Hornback, 1973). Such health alterations require acute care management, maintenance, and rehabilitation.

The federal government has responded to these needs by legislative acts for their correction. For example, the Social Security Act of 1935 provided monies for the preparation of public health nurses to correct a shortage of kind (Cooper & Hornback, 1973). Refresher courses for inactive nurses have been funded to overcome actual shortages in numbers of available nurses. To improve health care management in heart disease, cancer, and stroke, Regional Medical Programs were created in 1965 by Public Law 89-239. Education for practicing nurses was a condition of the law (Cooper & Hornback, 1973; Dietrich, 1971).

Extended Scopes of Practice. A final area in which CEPs have been responsive is in the creation of new roles for nurses. The availability of health care for all citizens was declared by President Nixon as a national goal. The administration felt that the health care system should be taken to the consumer rather than waiting for the person to seek help. To achieve that goal, it was recognized that nursing, the largest number of health care providers, needed to change. A national committee, composed of physicians and nurse leaders, was appointed to suggest ways to maximize the utilization of nurses and to launch the profession of

nursing into other realms. The committee observed that the basic preparation for nursing did not equip nurses for expanded roles. Responsibility for equipping nurses for these expanded roles was assigned to nursing continuing education (U.S. Department of Health, Education, and Welfare, 1971). A consequence of the planning has been changes in providers of care.

In the past, health care has been directed towards illness. Following President Nixon's proclamation, the past two decades brought a renewed awareness of ambulatory and preventive care. Prior to that time, ambulatory care was provided to certain socioeconomic groups by state public health services and the United States Public Health Service. Presently, the baccalaureate prepared nurse, 20% of the nurse population, is the only nurse prepared at the preservice level to provide any form of ambulatory care (U.S. Department of Health & Human Service, 1986). Early detection of minor illnesses and the maintenance of chronic illnesses can be managed through ambulatory care. To that end, CE has been a pioneer in preparing nurse practitioners for an expanded role. Nurse practitioners have assumed some of the traditional functions of physicians such as diagnosis

and medical management of certain conditions (ANA, 1982; Vacek & Ashikaga, 1978).

In summary, CEP responsiveness to the innovations have complemented the existing health care delivery system. Preservice education has been supplemented through courses for remediation and maintenance. For innovations developed and utilized for the surveillance of persons with illness at medical centers, CE has been the first component of the nursing education system to be aware of and to educate nurses about such innovations. CE has enabled nurses to extend their scope of practice in both acute care and ambulatory care facilities. CE has linked knowledge from a variety of sources with potential users in the practice arena. Those linkages have altered nursing in its delivery of health care and established CE as an agent for planned change for the diffusion of information.

Nursing Theory

In its movement towards professionalization, nursing has sought its identity through nursing theory development. Many persons believe that progress towards the professionalization of nursing depends upon the acceptance

and the utilization of a nursing theory in the education of nurses and in the practice of nursing. When nursing theory is adopted as a legitimate component of nursing, members of the nursing community must change the way they view nursing and its practice. Why this change is such a challenge can be seen by examining (a) the evolution of nursing theory, (b) nursing paradigms, and (c) the central themes of nursing theories.

Evolution of Nursing Theory

Between 1950-1970 nursing scholars such as Peplau (1952) and Henderson (1966) offered new conceptualizations about nursing. These leaders were instrumental in changing views about the nature of nursing, which prior to the 1950s had focused on "illness" with its signs and symptoms that were managed through performed tasks stipulated by the physician. In contrast, Peplau (1952, pp. 4-16) argued that the essence of nursing was embedded within the nurse-patient relationship. Nurses utilized therapeutic interpersonal relationships to assist an individual in defining one's problems and resolutions. Henderson (1966, pp. 4-19) contended that the focus of nursing was the individual who

had a set of needs derived from the illness. Following the identification of the needs, nurses assisted individuals in becoming independent in managing the needs resulting from illness. If a person were incapable of meeting the defined needs, they were met by the nurse. Peplau and Henderson differed about who determined the problems/needs. For Peplau, the patient determined the problem with clarification from the nurse, while for Henderson needs were determined by the nurse (Meleis, 1985, p. 15).

Although Peplau (1952) and Henderson (1966) aroused interest in the nature of nursing, their works were not generally accepted. They were, however, influential in bringing to the nursing community an awareness that nursing had a mission and a set of functions different from medicine and others within the health care delivery system (Meleis, 1985, p. 15). Not much progress was made in the development of nursing theory until the 1970s (Meleis, 1985, p. 13; Torres, 1986, pp. 5-6). The impetus for this progress came in 1965 when the American Nurses' Association issued a position paper stipulating that nursing theory development be given priority for the advancement of nursing knowledge.

Since that time, other nursing theorists have offered formulations about the phenomena of nursing.

To evaluate the progress of theory development, nurse-scholars turned to the philosophy of science and debated each view from the philosophy of science for its relevancy as a principle structure for theory development.

One group of nurse-scholars drew upon logical empiricism as a basis for theory development (Jacox & Webster, 1986; Meleis, 1985; Silva & Rothbart, 1984). James Dickoff and Patricia James, philosophers who were proponents of logical empiricism, were employed by the Yale School of Nursing to assist faculty in defining nursing concepts (Nicoll, 1986). In their position paper on a theory of theories, Dickoff and James (1968) suggested that nursing theory evolve from nursing practice, that it be at the level of situation producing, and that it be goal oriented. Nursing theories were expected to define concepts, propositions, and laws and adhere to formal logic (Dickoff & James, 1968).

The proponents of logical empiricism denounced the work of Orem, Roy, King, and Rogers because their formulations lacked some of those qualities (Silva & Rothbart, 1984) and

were more models than theories (Flaskerun & Halloran, 1980). The question of models persists. Thibodeau (1983, pp. 9-13) argued that a model was a descriptive representation of nursing practice which outlined its goals, processes, and elements from which research questions were generated that led to theory development. Fawcett (1984) asserted that a model was more abstract and general than a theory and was not amenable to testing. Jennings (1987) noted that because both Thibodeau and Fawcett indicated that models identified concepts and propositions, their explanations failed to differentiate between models and theories. Meleis (1985) and Silva (1987), believing that substance was more important than labels, used the terms as synonyms.

In the late 1970s, other nurse-scholars recognized the limitations of logical empiricism for nursing theory development (Fawcett & Downs, 1986; Jacox & Webster, 1986; Meleis, 1985). Fawcett and Downs (1986) argued that prescriptive theory was premature for a discipline such as nursing that was still defining the characteristics and their relationships for the phenomena of interest. Jacox and Webster (1986) and Meleis (1985, p. 67) asserted that the formal requirements of logical empiricism for

reductionism, classification, and quantification denied some of the realities of nursing. In the view of these scholars, logical empiricism could not address nursing theory development.

Given that dilemma, a second group of nurse scholars drew upon two other views from the philosophy of science about the development of science: revolution and evolution (Jacox & Webster, 1986; Jennings, 1987; Meleis, 1985; Ramos, 1987; Silva & Rothbart, 1984). The source of the idea of revolution was Kuhn's (1970) thesis that scientific developments were responses to crises in a world view or paradigm. Change involved three stages. The first was the preparadigm stage or "immature" science. It was followed by the paradigm stage or normalizing period whereby competing theories were tested and a dominant theory emerged and was accepted. Revolution, the final stage, occurred whenever sufficient anomalies arose to negate plausible explanations from the existing theory. Kuhn further asserted that scientific developments were noncumulative which limited a theory's utility. It could not be combined with another theory to increase the latter's usefulness (Meleis, 1985, p. 58).

Nurse-scholars who have espoused the revolutionary view have declared nursing to be at the preparadigm stage because they believe that the nursing profession lacks a coordinated effort among nurse-scholars to develop nursing theory through research. The efforts of nurse-researchers are believed to be fragmented, repetitive, and without direction (Hardy, 1978, 1983). They followed the thesis of Kuhn (1970) who described the preparadigm stage as a period of unrest characterized by divergent schools of thought which addressed the same phenomena in different ways. Some nurses continue to believe that nursing is at the preparadigm stage (Fawcett, 1984; Hardy, 1978, 1983).

One of the first to describe the evolutionary view was Toulmin (1972) who claimed that the cornerstone of a theory emerged from its concepts. He maintained that concepts represented communal ideas or the cultural heritage of groups. Because change resulted from the competition, debate, clarification, and reconstruction of various concepts, sciences of practice emerged through evolutionary processes.

Laudan (1977) viewed the development of science as a problem-solving activity. Problems are the focal point of

scientific development and theories are the end result. The evaluation or test of a theory resides in its ability to provide answers or solve problems that arise from changing circumstances or conditions of a practice discipline. The relevant element of a theory is its problem-solving effectiveness rather than its distinguishing characteristics. As concepts change their meaning must be examined within a larger context and, therefore, competition and the integration of research traditions are continuously employed for solving problems.

The proponents of the evolutionary view did not agree on a single view of man nor did they accept the Kuhnian view regarding the emergence of a dominant theory. They recognized the pluralism in the realities of nursing, valued the process of theory development through correction and expansion, and accepted some of the formulations about nursing as theory (Marriner, 1986; Meleis, 1985). Stevens (1983) identified as nursing theories the formulations about nursing advanced by Myra Levine, Hildegard Peplau, Ida Jean Orlando, Sister Callista Roy, Dorothea Orem, Martha Rogers, Lydia Hall, and Dorothy Johnson. Silva (1986) identified substantive research studies that tested and verified both

the concepts and propositions for the formulations of Dorothy Johnson, Dorothea Orem, Margaret Newman, Sister Callista Roy, and Martha Rogers.

A third development from the philosophy of science that has impacted upon nursing theory development has been the shift in emphasis from quantitative to qualitative research methods to test nursing theory. In the late 1970s, nurse-scholars began to question the limits of quantitative research methods which, they believed, often sacrificed meaningfulness for rigor (Silva & Rothbart, 1984). Silva and Rothbart (1984) argued that the evolutionary view of science as a process of human behavior and thought permitted the usage of different methods of inquiry. That change in research emphasis has allowed nursing to examine phenomena dealing with the realities or meanings of life experiences (Chenitz & Swanson, 1986; Parse, 1987).

Cognizant of these philosophical issues, nurse-scholars have (a) debated the need for theory (Meleis, 1985), (b) the legitimacy of theory versus a conceptual model (Fawcett, 1984; Fitzpatrick & Whall, 1983), and (c) whether a theory was unique to nursing, borrowed from another discipline, or shared with other disciplines (Crawford, Dufault, & Rudy,

1979; Fawcett, 1983; Johnson, 1986). Convergence among nurse-scholars has occurred to the extent that they agree that nursing embraces four major concepts: man, health, nursing, and environment (Fawcett, 1984; Fitzpatrick & Whall, 1983; Meleis, 1985; Torres, 1986).

In summary, nursing theory development has generated controversy among nurse-scholars. In the process, nurse-scholars have re-examined the philosophical underpinnings of nursing theory development. From that review, different points of view about the structure of a theory emerged and were accepted by some nurse-scholars. That posture encouraged nurse-theorists to continue their development of nursing theory while they corrected, expanded, or refined the theory.

Nursing Paradigms

Views about nursing have changed from nursing as a vocation to that of nursing as a scientific discipline (Newman, 1983; Parse, 1987). Parse (1987, pp. 1-3) maintained that nursing's emergence as a science is consistent with other disciplines because nursing encompasses more than one paradigm. A paradigm provides a

general orientation about the phenomena of concern from which a supporting belief system develops, and a new paradigm occurs whenever scholars depart from the prevailing view about a phenomena for theory development and the subsequent research studies. Parse (1987) further asserted that nursing theories were grounded in the belief system of the theory's respective paradigm. Nursing theorists have described man and health by two different conceptualizations which are the totality and the simultaneity views. The articulation of two distinct views about man and health produced another paradigm. Nursing, Parse concluded, consists of the totality and simultaneity paradigms.

Totality view of man. The totality view is the oldest and most widely used view about man and health (Parse, 1987, p. 4). The view regards man as a biopsychosocial-spiritual organism who is the sum of its parts. Man adapts to and interacts with the environment to maintain balance and to achieve goals. Man's environment consists of the surrounding internal and external stimuli. In the totality paradigm, health is viewed as a dynamic state and process of biopsychosocial and spiritual well-being (Parse, 1987), and

optimal health is achieved through the manipulation of the environment.

Simultaneity view of man. The new paradigm views man as more than the sum of parts (Parse, 1987; Rogers, 1980). Humans are regarded as unitary energy fields who interact as a whole with environmental fields. The functioning unit of the living and the nonliving is its energy fields. The interactions between the human and environmental energy fields are simultaneous, mutual, and continuous. Human behavior is a synergistic response to the interactions of the energy fields. Thus, persons and their environment are perceived as irreducible energy fields that are integral with one another and which continuously change in their evolution (Rogers, 1980). Health in the simultaneity view is a "value state" determined by the meaning assigned by the individual and his/her culture to the experiences arising from the interacting energy fields of man and his/her environment (Rogers, 1980). Health is a process of becoming (Parse, 1987, p. 160).

Central Themes of the Theories

These conceptions of man and health are reflected in these two nursing paradigms. From an analysis of the existing nursing theories, Torres (1986, p. 4) identified three major themes that described the theorist's approach to man and health. The themes represented the central focus of a nursing theory, but as Torres noted most theories were not restricted to a single theme. The three themes are (a) interactions, (b) needs, and (c) systems. The central theme prescribes the essential information specific to nursing.

Figure 1 presents the paradigms and the supporting nursing theories included in this investigation. The figure depicts the date, theorist, and title which denotes the theorist's orientation, and positions the theory according to its central theme and its respective paradigm.

The totality paradigm includes each of the central themes defined by Torres (1986). The interaction theme focuses upon the patient and the nurse and views the nurse-patient relationship as a way to meet needs and deal with stress. In the need theme man has a special set of needs which arise from altered health states. These health derived needs have to be met for the patient or the patient

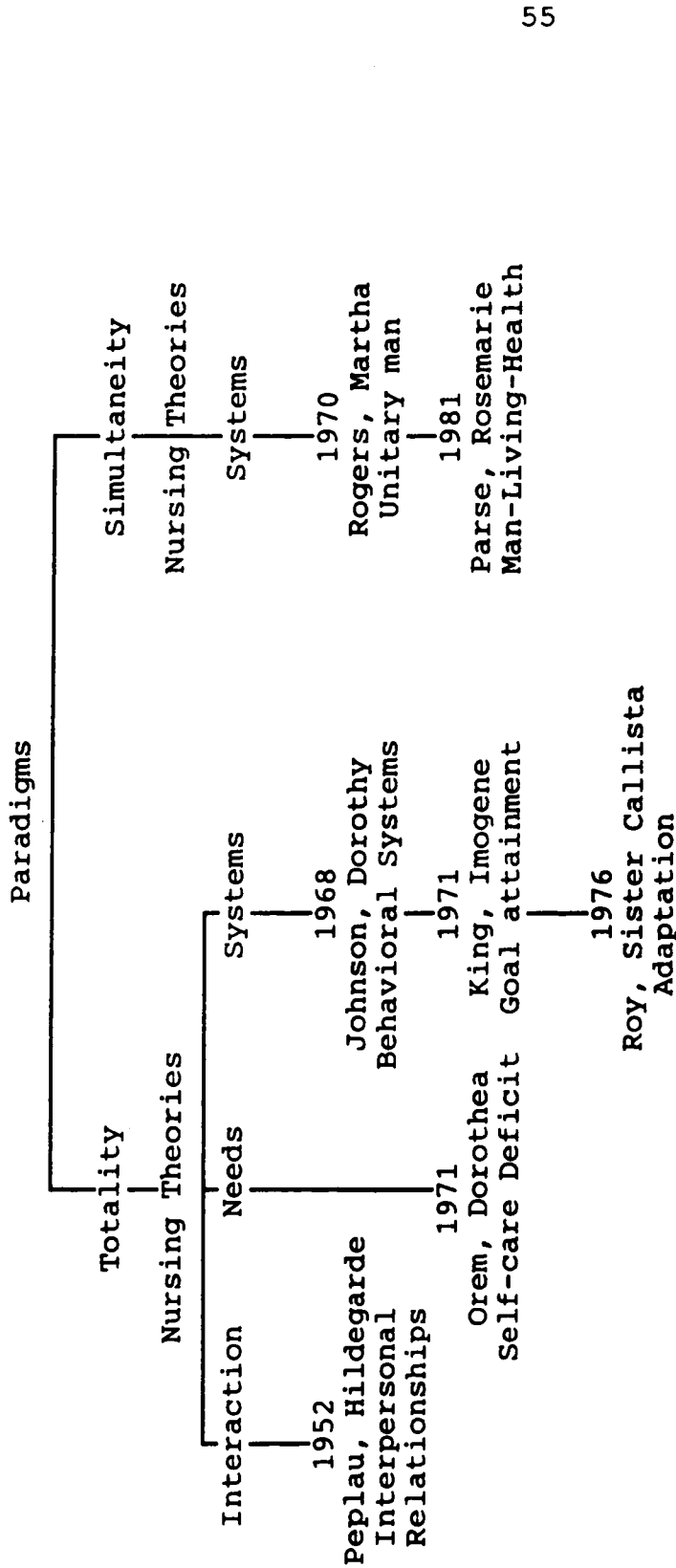


Figure 1

Nursing Paradigms and Nursing Theories*

*Adapted from: Parse, R. (1987). Nursing science: Paradigms, theories and critiques. Philadelphia: Saunders.

Torres, G. (1986). Theoretical foundations of nursing. Norwalk, CT: Appleton-Century-Crofts.

assisted to meet the need. The systems theme presents man as a composite of interdependent, interrelated subsystems which tend to move towards balance between internal and external forces. The malfunction of one subsystem influences the performance of other subsystems (Torres, 1986, p. 6).

Presently, the simultaneity paradigm contains only the systems theme as a central focus for nursing theories. Man cannot be reduced to the sum of his parts. As Rogers (1980) describes the basic theme, there is a universe of open systems that are continuously open, changing, and becoming more differentiated. Recurring and emerging patterns from the interacting energy fields are the substance of a given situation.

In summary, two different views about man and health have been articulated in the evolving nursing theories. From these views, nursing theorists have conceptualized different approaches to the phenomena of nursing which separates nursing from the medical model of health care delivery. The problem remains: to change nursing practice, nursing theory must be utilized in the practice setting.

Conceptual Framework

The utilization of nursing theory as the bases for nursing practice is a new phenomenon for most practicing nurses because their education and practice is based on the medical model. For change to occur in nursing practice, those practicing nurses must be educated to utilize nursing theory. The practice of nursing changes to the extent that programs regarding innovations are available to nurses in the practice setting.

The linkage of nursing theory to the practice setting involves planned change instituted through continuing education in nursing. Continuing education providers as change agents maintain communication channels between a change agency or resource system and a client system or audience of potential users. As change agents, CEPs engage in a series of mental activities and action plans whenever they address nursing theory. That process is described by Rogers's (1983, chap. 5) innovation-decision model. Figure 2 depicts the corresponding activities of CEPs for each stage of the innovation-decision model in their response to nursing theory as a stimulus for change.

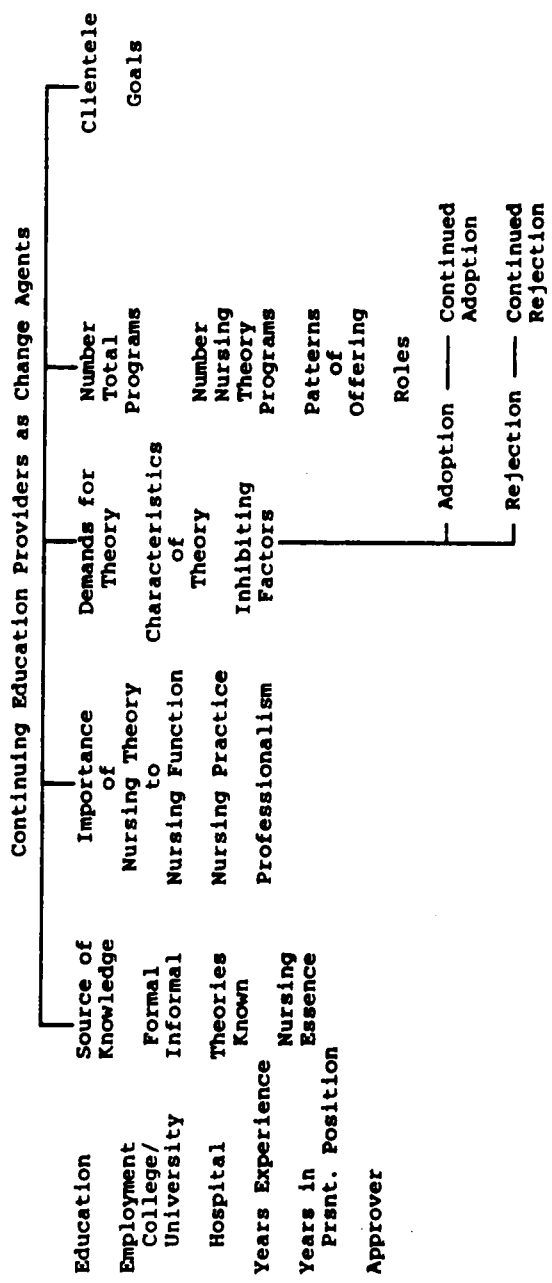
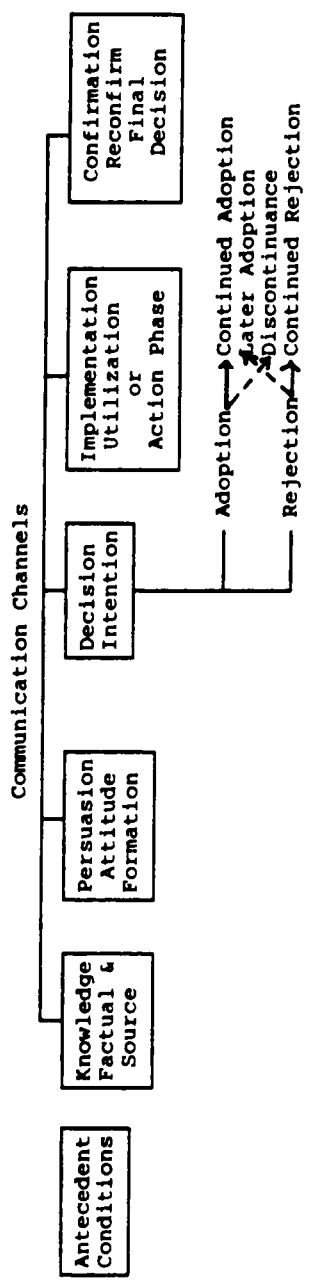


Figure 2

Comparison of the Innovation-Decision Model* to Continuing Education Providers' Activities for Nursing Theory

*Adapted from Rogers, E.M. (1983). Diffusion of innovations (3rd ed.). New York: Free Press.

In this study, CEPs are regarded as a special type of change agent in the diffusion process and nursing theory is an innovation which they are called upon to diffuse. For the purposes of this investigation, CEPs are the linking agents between practicing nurses, potential users of nursing theory, and a resource system or expert on nursing theory. The involvement of CEPs in diffusing nursing theories to the practice setting can be assessed by the innovation-decision model.

Rogers's (1983, pp. 164-189) model is briefly summarized here. An individual employs a process for diffusing information which begins with one's first decision regarding an innovation. The innovation-decision model describes the mental activities and sequence of events that an individual makes when selecting an answer to a stimulus for change. For information flow to occur from one stage to another stage, communication channels must be maintained by a change agent.

The innovation-decision model identifies five stages (a) knowledge, (b) persuasion, (c) decision, (d) implementation, and (e) confirmation that an individual utilizes when making a decision regarding an innovation, a

stimulus for change. The process reduces uncertainty about the anticipated advantages and disadvantages of the innovation to the client system.

During the initial knowledge stage information is gathered about the substance, operation, and application of an innovation. Knowledge acquisition moves an individual to the persuasion stage where attitudes about an innovation are formed. These emerging attitudes or beliefs are influenced by the perceived attributes of an innovation. From the knowledge and persuasion stages, an individual enters the decision stage in which he declares intentions about an innovation and makes a temporary choice to accept or reject the innovation. At this point, additional information about the innovation may be sought for clarification and verification. Pending further information, a decision for rejection is made. However, the decision may be reversed whenever sufficient information has been received. A decision for adoption advances an individual to the implementation stage or action phase in which strategies to complete adoption are instituted. Following installation of the required actions for adoption, an individual proceeds to the confirmation stage in which he reaches a final decision

regarding adoption. Stability is sought through reconfirmation and these actions reduce any remaining uncertainty. Favorable outcomes from an innovation lead to its acceptance as the standard for that setting, otherwise, the innovation is discontinued.

To become effective change agents with regard to nursing theory, CEPs require knowledge about nursing theories. Awareness knowledge refers to their source of knowledge and the specific theorists known. Characteristics of the nursing theory defines the how-to knowledge which is utilized during the decision stage. The essence of nursing as defined by a particular theory constitutes principle knowledge or its proper application. Knowledge is the foundation for the decision, implementation, and confirmation stages.

In the persuasion stage, CEPs formulate beliefs about the importance of nursing to various aspects of nursing: hence, a nursing theory's relevancy to the client audience. The perceived importance influences their progression to the other stages. During the decision stage when CEPs declare their intentions, they consider the demands for nursing theory, the characteristics of the theory, and inhibiting

factors. The outcome is acceptance or rejection. Acceptance moves the CEP to the implementation stage or action phase while rejection allows CEP to return to the knowledge and persuasion stages for additional information. Adoption requires the installation of programs that include nursing theory. The programs are tailored to the situation. To accomplish that task, CEPs perform various roles. In the final stage, reconfirmation is sought through the clientele served. Stability is established whenever nursing theory becomes an established goal for continuing education in nursing.

Summary

This chapter described the process of planned change as the means for transmitting new knowledge to a practice setting. It began with an examination of factors associated with planned change, described diffusion, and presented the innovation-decision model as the theoretical framework for decisions related to an innovation. It was followed by an overview of planned change activities of continuing education in nursing. The chapter concluded with a discussion of nursing theories that describe the phenomenon

of nursing, issues associated with nursing theory development, and the conceptual framework for the study. Chapter three presents the methodology used to conduct the study.

CHAPTER 3

METHOD OF THE STUDY

Social and legislative forces have challenged the discipline of nursing to change its nursing practice from the medical model to a nursing theory based practice with its own substantive knowledge for nursing's area of sole responsibility in the delivery of health care. For nursing practice to change, nursing theory must be utilized in the practice setting. Continuing education in nursing is the primary linking agent between nursing theory and the workplace. The purpose of this investigation was to determine the extent to which selected continuing education providers (CEP) disseminated nursing theory to nurses in the workplace and to gauge the perceptions held by CEPs with respect to beliefs towards nursing theory and programming issues. In this chapter the general design, population and sample, instrumentation, collection of data, and analysis of data used to accomplish the investigation are described.

The Research Design

This study followed a descriptive survey research design. In survey research, the investigator systematically collects information for the description, explanation, or exploration of beliefs, values, and behaviors of people (Babbie, 1973). In a descriptive survey, information about an area of interest is gathered to provide factual information for describing an existing situation (Kerlinger, 1986; Waltz & Bausell, 1981) and to gauge the perceptions (Leedy, 1980), beliefs, and attitudes held by individuals towards a given situation (Kerlinger, 1986).

For this survey, data were collected from selected continuing education providers for nursing in order to gauge their knowledge, beliefs, and implementation practices with respect to nursing theory. Additionally, demographic data were gathered to determine the characteristics of the sample.

Population and Sample

Subjects were continuing education providers who had offered continuing education programs approved by either The American Nurses' Association, a state nurses association, or

state board of nursing during the 1987 calendar year. Subjects were affiliated with hospitals and schools (i.e., colleges and universities). The selected sample was drawn from continuing education providers from 38 of the continental United States.

Population

The sampling frame was generated from listings of approved continuing education providers voluntarily supplied by the American Nurses' Association (ANA), state nurses associations, or state boards of nursing. The sampling frame is "the set of people that has a chance to be selected" (Fowler, 1984, p. 19). The continuing education providers had been granted approval for continuing education (CE) offerings by one of these respective agencies for the 1987 calendar year. Approved providers were selected because it was assumed that they would have a vested interest in upholding the ANA charge to continuing education in nursing to address nursing theory.

Responses to an initial mailing requesting such information from state nurses associations or state boards of nursing in the 48 continental United States and the

District of Columbia appear in the Appendix A, Table A-1. A total of 907 approved providers were identified from 23 state nurses associations or state boards of nursing; 220 approved providers were identified by the ANA. A copy of the letter to generate the sampling frame appears in Appendix B. Although the generation of the listing began in 1986, the lists identified those continuing education providers who were approved for 1987.

The generated listing included a mix of approved providers which ranged from providers with no direct responsibility for nursing education or to nursing practice to providers with responsibility for both nursing education and nursing practice. Therefore, the final sampling frame was composed of CEPs from hospitals and schools (i.e., colleges and universities). These two groups have a responsibility for educating nurses in the workplace. The number of approved providers in these two categories is displayed in the appendix A, Table A-2. The table also places the states in their respective ANA region and divides the states according to the state's requirement for nursing theory and/or nursing diagnosis as stipulated in the state's nursing practice act.

Sample

From the known population of 575 approved CEPs of which 140 CEPs were from schools and 435 CEPs were from hospitals, an initial mailing was sent to 300 subjects. They were selected by two procedures: census and simple random sampling. A census of the 140 CEPs from schools formed one group of subjects. The second component of the sample was a simple random selection of 160 CEPs from hospitals.

Simple random sampling was achieved with the assistance of two persons unrelated to nursing or to this study. The table of random numbers procedure described by Leedy (1980) was followed. In that plan, each potential subject was assigned a number from 001 to 435, the total number of subjects. The entry point for the table of random numbers was determined by the first two numbers of the serial number [G 199338067 I] of a dollar bill which had been drawn from a group of dollar bills by one of the two persons assisting with the random selection. A toss of a coin determined that the first number, one, represented the horizontal row of numbers, the second number, nine, represented the vertical column of numbers. Those entry digits designated the random block within the random table to begin the selection.

Three-digit numbers were selected until a total of 160 subjects were chosen. Previously drawn numbers were skipped and the next three-digit number in the sequence was selected to maintain the same chance probability for other numbers (Leedy, 1980).

Instrument

Instrument Development

A questionnaire was developed by the investigator to gather information from selected CEPs. The specific variables of interest were selected from three sources: knowledge diffusion; adult and continuing education program design literature; and nursing theory. The general plan of the questionnaire emerged from the literature related to knowledge diffusion. That literature identified a series of actions required to link new knowledge to potential users. The literature also identified variables known to influence knowledge diffusion. From that scheme, selected factors significant to the linking process were confirmed in the writings of Boone (1985) and Knowles (1980) as important considerations for programming in adult and continuing education. Content for the design was extracted from

nursing theory literature. The section of the survey instrument that sought information related to specific nursing theories was limited to seven identified nursing theorists. Those named nursing theorists met two criteria: (a) they were exemplars of the nursing paradigms and the central focus of nursing theories (Torres, 1986), and (b) they had generated a substantial number of empirical nursing research studies (Silva, 1986, 1987).

Items were chosen to represent beliefs, programming issues, knowledge related to nursing theory, and the demographic characteristics of the respondents. Rogers (1983) maintains that knowledge is foundational to the developed beliefs about a new area. The formulated beliefs enable one to move towards a decision regarding the new idea. Those steps in the innovation-decision process are influenced by antecedent conditions, hence, the inclusion of the general background information. The instrument was divided into four parts to obtain information related to the defined areas.

Part I of the instrument was designed to gauge the intensity of beliefs held by CEPs about nursing theory with respect to nursing functions, nursing practice, and nursing

as a profession. Each respondent was asked to rate the importance of nursing theory on a multiple-item scale for each of the three factors.

Part II of the instrument was designed to gauge perceptions about selected programming issues and to gather factual information about programming practices. Programming concerns included (a) demands for nursing theory, (b) characteristics of a nursing theory that influenced decisions to offer nursing theory programs, (c) patterns of CE offerings on nursing theory, and (d) role performance of CEPs. Again, each subject was asked to respond to a multiple-item scale for each of the four factors. Factual information sought was (a) total number of programs for the 1987 calendar year, (b) number of nursing theory program offerings for the same period, (c) clientele served, (d) program approver, and (e) the goal of the institution towards nursing theory.

Part III of the instrument was designed to gather information about three factors related to knowledge. The first component utilized another multiple-item scale for CEPs to estimate their own level of knowledge related to the seven identified theorists. A second knowledge component

was the identification of the one theorist of which the CEP was most knowledgeable. The third knowledge component was the selection of the essence of nursing according to the nursing theorist for which a CEP was most knowledgeable.

Part IV of the instrument was designed to gather information about the general background of a CEP. Two general areas were included: source of knowledge about nursing theory and demographics. Source of knowledge was defined as formal and informal programs, number of course offerings, and number of theories studied. Demographics covered three areas (a) highest level of education, (b) type of employing agency, (c) and experience. Experience was defined as the total years as a registered nurse and as the years in present position. The final questionnaire item asked CEPs who had not included nursing theory to list significant reasons for the exclusion.

Instrument Validity

The three most relevant types of validity, according to the American Psychological Association's Standards for Education and Psychological Tests (1974), are content, criterion, and construct validity. Content validity was

considered to be the greatest concern for this study. Content validity is essentially judgement done singly or by a group of judges. Content validity is required whenever the researcher wishes to confirm that a series of questions and their subset of items represent the defined universe and that each item is relevant to the identified subsets.

The instrument was evaluated by a panel of experts to ensure content validity. The panel of eight nurse experts represented two groups of nurse educators. One group was nurse educators associated with formal nursing education (i.e., preservice and graduate education); the other group represented continuing education and staff development.

The educational background of the nurse experts from formal educational programs consisted of two persons with earned doctorates, one person who is a doctoral candidate, and one person with a masters degree. In their respective roles, each panelist utilizes and/or teaches nursing theory(ies). Additionally, one of the judges contributed a chapter on nursing theories to the sixth edition of a 1988 publication of a medical-surgical nursing text. All judges representing continuing education and staff development hold at least a masters degree. Two of those panelists were

enrolled in doctoral studies. From this latter group, two nurse educators are employed by an agency that requires the utilization of nursing theory in nursing practice.

The panel members were asked to assist in validating the instrument by using the following criteria:

1. Are the items measuring content about the major nursing theories?
2. Are the items representative of nursing theory as it relates to nursing practice and the advancement of the nursing profession?
3. Are the items in each section relevant with respect to content in each subset?

The panel of experts were asked to make suggestions with respect to appropriateness, structure, simplicity, and wording. Recommendations from the experts were incorporated in the revised instrument. It was refined until the instrument contained those items deemed essential for obtaining information for the study.

Instrument Reliability

To ensure reliability, the instrument was pilot tested with a group of eight CEPs in Washington, D.C. who were not

included in the sampling frame. The subjects in the pilot group were selected from a current listing of CEPs obtained from the District Nurses' Association of Washington, D.C. Those CEPs were considered to be representative of the group of CEPs to be surveyed. Although no statistical analyses were performed, a frequency tabulation demonstrated consistency in answers given to the questions. Kerlinger (1986) defines consistency as one of the characteristics of reliability. The greater concern, however, for reliability is its estimate of systematic variance, that variance generated from sources other than error variance, the fluctuations due to chance (Kerlinger, 1986).

Following the administration of the questionnaire to the sample subjects, Cronbach's formula was used to measure internal consistency (Carmines & Zeller, 1979) of responses among the respondents. Reliability coefficients for the eight factors with multiple-item scales contained in the instrument were computed based on 187 subjects. Table 1 displays the factors and their respective reliability coefficients. An itemization of each factor for each of the respective scales appears in Appendix C, Table C-1.

Table 1

Reliability Coefficients for Each of the Eight Multiple-Item Scales on the Instrument

<u>Factor Scale</u>	<u>Reliability Coefficient</u>
Nursing Functions	.8588
Nursing Practice	.9220
Nursing Profession	.8911
Demands for Theory	.7544
Characteristics of Theory	.8154
Patterns of Offerings	.5953
Roles of CEPs	.8353
Level of Knowledge	.9100

Data Collection

The research questions pertained to a predetermined population; therefore, survey research and the use of a self-administered questionnaire was the data collection used. The first mailing was completed May 30, 1988. Questionnaires were mailed directly to each of the selected CEPs at their place of employment. The final format of the questionnaire contained a cover letter cosigned by the author and the advisor for this study. Questionnaires were accompanied by a pre-addressed postage paid return envelope. Questionnaires were numbered; the date of return was recorded on a check sheet. A copy of the initial cover letter and the survey instrument appear in Appendix D.

To ensure that a maximum number of surveys were returned, a second questionnaire was sent to each of the nonrespondents June 24, 1988. The second mailing included another cover letter cosigned by the author and the advisor encouraging participation. Another pre-addressed postage paid envelope was included. A copy of the second cover letter is in Appendix F.

As questionnaires were returned, all data were tabulated by hand and placed in a data file. Incomplete questionnaires were included with unanswered portions treated as missing data. Unusable questionnaires were excluded. Table 2 lists reasons why a returned questionnaire was designated as unusable.

Results as displayed in Table 3 were based upon usable returns from 187 continuing education providers representing 62% of the total sample. The returns consisted of 91 respondents (65%) from the entire population of schools and 96 respondents (60%) from a random sample of hospitals. Results based on hospitals would therefore be subject to an error rate of nine percentage points. From the total sample, 43% of the respondents returned the questionnaires following the first mailing; the second mailing increased the total returns by 19% as displayed in Table 3.

No other means were utilized to increase the response rate. Literature on survey research indicates that repeated efforts interject other sources of bias. According to Sudman and Bradburn (1982), the accumulated evidence regarding participation in survey research indicates that

Table 2

Reasons Returned Questionnaires Declared Unusable

<u>Reason</u>	<u>Number</u>
Incorrect Address	2
No Programs	
Lack of Faculty	1
Discontinued CE Department	1
Did Not Answer	
Subject with Information	
Leave of Absence	1
Changed Employment	1
Organizational Structure	
Invalidate Questionnaire	1
Questionnaire too Complicated	2
Total	9

Table 3

Distribution of Responses to Mail Survey from Selected
CE Providers from Schools and Hospitals

	Schools ^a		Hospitals			Totals
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	% ^b
Number Mailed	140	47	160	53	300	100
Returned						
Usable	91	65	96	60	187	62
Unusable	7	5	2	1	9	5
Subtotals	98	70	98	61	196	67
Mail Response Usable Returns						
Returned						
First Mail	66	47	62	39	128	43
Second Mail	25	18	34	21	59	19

Note. ^aSchools include colleges and universities.

^bAll percentages rounded to nearest whole percent.

"participation is more a function of the potential respondents' general attitude towards surveys than of the content of a specific survey...people who refuse to participate in surveys appear to be more negative about surveys in general..." (p. 11). To determine the general attitude of nurses towards surveys, the author performed a cursory review of survey response rates by nurses reported in the literature. Of 17 documented studies, 11 studies reported response rates of 70% or greater with only three studies reporting response rates of less than 50%. These data suggest that nurses as a group respond to surveys.

Comparisons Between Early and Late Responders

Fowler's (1984) review of research on response to self-administered questionnaires indicated that early respondents are better educated and more interested in the subject of the research while late respondents are less interested.

To counter this latter source of bias, comparisons were made between respondents who returned the questionnaire following the first, early responders, and second, late responders, mailings. Babbie (1973) maintains that such comparisons also give estimates of nonresponse bias; that

source of error which results from participants who were selected for the sample but failed to participate. It is assumed that nonrespondents will be more like the late responders than the early responders (Babbie, 1973).

A t test of the means to compare waves was performed for the interval variables. These included the multi-item scales and selected demographic variables. These findings appear in Appendix F, Table F-1. Only one of 12 comparisons of mean scores between the two times of response was significant. This was for the perceived level of knowledge of the respondents for specific nursing theories ($t = 2.43$ $df = 181$, $p < .016$).

Crosstabulations utilizing the chi-square statistic, performed to relate time of response and 19 categorical variables, produced weak relationships for only three of them (see the chi-square analyses in Appendix F, Table F-2). The findings showed that a significant relationships existed between time of response and the formal education that included nursing theory in graduate programs (chi-square = 8.125, $df=1$, $p<.004$, Cramer's $V = .214$). Two additional significant results were for rankings on only two of five responses for clientele served by nursing theory programs.

Limited association existed for each of the three pairs of variables that attained significance, with Cramer's V of less than .4 for each.

It seems that the respondents are more similar than dissimilar. It is assumed that the groups belong to the same population and that there is little likelihood of nonresponse bias in the results.

Data Analysis

Data were analyzed using the Statistical Package for the Social Sciences (SPSSX) software package. Analyses included frequency distributions, crosstabulations, the chi-square test of independence, Pearson's correlation, one-way analysis of variance, and the t-test. Frequencies and the percentage distribution of all items on the instrument were computed by the program FREQUENCIES. The following research questions and their related sub-questions guided the subsequent analyses.

1. What is the nature of the background and knowledge of the CE providers with respect to nursing theory?
 - a. What are the sources of their knowledge?

b. How knowledgeable do they feel about commonly known nursing theorists?

c. Can CE providers identify the essence of nursing for the nursing theorist they know best?

2. What are the CE providers' beliefs about the importance of nursing theory?

a. What importance do CE providers' place on nursing theory as it applies to various aspects of nursing functions?

b. What importance do CE providers' place on nursing theory as it applies to various aspects of nursing practice?

c. What importance do CE providers' place on nursing theory as it applies to various aspects of establishing nursing as a profession?

3. What are the CE providers' practices with respect to the implementation of nursing theory?

a. What percentage of continuing education offerings during the 1987 calendar year have included nursing theory?

b. What planning decisions do CE providers consider when offering nursing theory in relation to: (a)

demands for theory, (b) characteristics of a theory, (c) patterns of offerings, and (d) roles that CE providers feel competent to perform?

c. What institutional goals influenced CE providers in their planning decision with respect to nursing theory?

d. What population is served by CE providers who address nursing theory?

e. Who approves the program offerings?

4. Are there any relationships between a CE provider's level of knowledge, beliefs, and practices related to the sources of knowledge with respect to nursing theory?

5. Are there any relationships between various aspects of CE providers' knowledge, beliefs, or practices and the demographic characteristics (i.e., education, type of employing agency, and experience)?

6. Are there any differences in the knowledge, beliefs, and demographic characteristics between CE providers who provide nursing theory and those who do not?

a. Is there any difference in the level of knowledge for specific nursing theories between CE providers who provide nursing theory and those who do not?

b. Is there any difference in the perceived importance of nursing theory as it relates to nursing functions, nursing practice, and to establishing nursing as a profession between CE providers who provide nursing theory and those who do not?

c. Is there any difference in the demographic characteristics of education, type of employing agency, and experience between CE providers who provide nursing theory and those who do not?

7. What reasons do CE providers give for not including nursing theory in their program offerings?

The survey instrument utilized for this study sought two types of information: factual information and perceptions about nursing theory. The section of the instrument on background information sought information on four areas of factual information: (a) source of knowledge, (b) education, (c) type of employing agency, and (d) experience that were used as variables for other analyses. Four additional factual items were included to provide more descriptive information about the existing situation of nursing theory diffusion by CE providers, but the items did not serve as a basis for comparisons.

Crosstabulations, to determine associations, were used in two instances: (a) to gain a more precise description of nursing theory offerings in the respondent's formal education by determining the relationship between number of courses on nursing theory with the number of theories offered, and (b) to determine the relationship between identified nursing theorist and the essence of nursing as defined by the theorist.

All other items on the survey instrument elicited perceptions related to various aspects of CE providers' knowledge, beliefs, and practices with respect to nursing theory. Eight multi-item scales on the survey instrument gauged those perceptions. As previously stated in the section under instrument reliability, reliability coefficients were determined for each of the eight scales using the formula for Cronbach's Alpha. Six of the scales--function, practice, profession, characteristics, knowledge, and roles--produced an alpha coefficient above 0.80 with one scale, demands, at 0.7544 and the other scale, patterns, at 0.5953. Such internal consistency of responses from the respondents permitted the utilization of summed scores for each of the scales (Kerlinger, 1986) for other analyses.

Pearson correlations were performed to test the significance of relationships between the demographic variables, experience and formal theory, for each of the eight scales.

One-way analysis of variance was performed to test the significance of difference between the mean scores for the eight scales and the variables defined by the factual information derived from the background information.

Chi-square test of independence was performed to determine that one variable was not associated with another. The chi-square was applied to those questions that were answered by frequencies for which categories were established for a specific area. For example, the respondents were subdivided into providers of nursing theory and nonproviders for purposes of determining relationships of other variables.

The t-test of the means was performed to test the significance of the difference between the means when two groups existed. Specifically, it was used to test the difference of the mean score on the appropriate multi-item scales for those CE providers who offered nursing theory and those who did not. Additionally, the t-test of the means

was computed to determine if differences existed between respondents according to their time of response.

Summary

The purpose of this chapter was to describe the methodology of this study which included the study design, population and sampling, instrument development, data collection, and the statistical methods used to analyze the data. Chapter four presents the findings generated from the survey.

CHAPTER 4

RESULTS

The purpose of the chapter is to present the results of data analysis related to the research questions. The chapter is divided into three sections. The first section describes the demographic characteristics of continuing education providers (CEP) who participated in the study. Section two presents findings related to the respondents' knowledge, beliefs, and program practices with respect to nursing theory. Section three addresses the inter-relationships between the respondents' knowledge, beliefs, and program practices with respect to nursing theory and their relationships with the demographic characteristics of education, type of employing agency, and experience.

Demographic Characteristics

Demographic information presented in this section describes the CEP respondents according to three areas: (a) highest level of education, (b) type of employing agency, and (c) experience. These demographic characteristics for the CEP respondents appear in Table 4.

Table 4

Distribution of Demographic Characteristics of CEP Respondents

Education		
<u>Nursing</u>	<u>Number</u>	<u>Percentage</u>
DNSc	12	6
MSN	63	34
BSN	24	13
AAS	4	2
Diploma	7	4
Subtotals	110	59
<u>Nonnursing</u>		
PhD	31	17
MS	36	20
BS	7	4
Subtotals	74	41
Combined Totals	184	100
Employing Agency		
Schools	88	48
Hospitals	90	49
Other	4	2
Totals	182	100

Table 4 continued

Experience

<u>Total Years</u>			
<u>Registered Professional Nurse</u>	<u>Number</u>		<u>Percentage</u>
1 - 10 years	18		10
11 - 20 years	72		40
21 - 30 years	68		37
31 - 40 years	19		11
41 plus years	4		2
Range	44 years		
\bar{M}	21.2		
\overline{SD}	8.6		
Mode	30 years		
Totals	181		100

Years Present Position

1 - 2 years	58		32
3 - 5 years	39		22
6 - 9 years	40		22
10 plus years	46		25
Range	30 years		
\bar{M}	6.4		
\overline{SD}	5.4		
Mode	2 years		
Totals	183		100

Note. All percentages rounded to nearest whole percent.

Level of education. The first demographic variable, highest level of education, sought two types of information: academic diploma/degree and the educational focus (i.e., nursing or nonnursing). The doctorate is held by approximately one-quarter (23%) of all respondents, with the greater proportion in nonnursing areas (17%) than in nursing (6%). For the majority (54%) of the respondents who have a masters degree, the reverse is true, with 34% in a nursing specialty and 20% in nonnursing areas. Given these findings, CEPs in this study are an educated group with the majority (77%) holding at least a masters degree.

With respect to the educational focus for the highest level of education, the majority (59%) of the respondents have their highest degree in nursing. This group includes only 19% whose highest level of education is at the preservice level (i.e., baccalaureate or technical education in nursing). For those with nonnursing degrees, 4% have only a baccalaureate degrees.

Type of employing agency. The demographic variable, type of employment agency, refers to hospitals and schools, which includes colleges and universities. The distribution shows that the respondents were almost equally employed by

hospitals (49%) and schools (48%). Four respondents (2%) noted that they function as consultants in continuing education.

Experience. The demographic variable of experience included (a) total years as a registered professional nurse, and (b) years in present position. Total years as registered professional nurse ranged from three to 46 years with a mean of 21.2 years, a mode of 30 years, and a standard deviation of 8.6. Ninety percent of the respondents have been registered professional nurses for periods greater than 10 years, while 40% of the respondents have been a registered professional nurse from 11 to 20 years, the largest single grouping. With regards to years in present position, the range in years for the respondents is one to 30, with a mean of 6.4 years, a mode of 2 years, and a standard deviation of 5.4. Only 25% of the respondents have been in their present position for 10 or more years with the single largest grouping in the 1 to 2 year period (32%).

Nature of CEPs' Knowledge

This part of the study presents findings from the research questions that sought both factual information and perceptions from the respondents with respect to their knowledge of nursing theory. The purpose of this segment is to describe selected aspects of the acquired knowledge related to nursing theory.

Knowledge of Nursing Theory

The research questions related to knowledge sought information about two aspects of knowledge: (a) the source of the knowledge, and (b) the perceived level of knowledge for selected nursing theories.

Source of knowledge. This area was defined by three indicators: (a) formal and informal education or learning projects that included nursing theory, (b) number of courses that incorporated nursing theory(ies), and (c) the number of nursing theories addressed in formal education. The indicator, formal education, was described by the level of education (i.e., diploma/degree) and the number of formal education programs that included nursing theory.

As depicted in Table 5, the respondents gained knowledge about nursing theory at all levels of formal education. The distribution shows that the majority of the respondents (60%) had nursing theory included in their masters program. Table 6 further describes the utilization of formal education programs for knowledge acquisition. The distribution suggests that a slight majority (56%) of the CEP respondents had nursing theory content in one formal education program, while 27% had nursing theory content in two programs. Six percent of the respondents had nursing theory in three different programs and some respondents (12%) had no formal education in nursing theory.

The second indicator, number of courses that included nursing theory, identified the pattern of offerings in formal education. For those CEP respondents who had nursing theory in their formal education, the dominant pattern was to have nursing theory as part of several courses (49%). A single course on nursing theory was the second most frequent offering (22%); however, 16% of the respondents indicated that their formal education included several entire courses on nursing theory. A small percentage (6%) of the

Table 5

Distribution of Sources of Knowledge of Nursing Theory of CEP Respondents

<u>Formal Programs</u>	<u>Number</u>	<u>Percentage</u>
Doctorate	23	13
Graduate (Masters)	109	60
Baccalaureate	81	45
Diploma	20	11
Associate Degree	4	2
No Response	13	-
Totals	181 ^a	100
<u>Number Courses</u>		
Single Course	38	22
More than One Entire Course	27	16
Part of Several Courses	85	49
Combination	12	7
Not Offered	10	6
Totals	172	100
<u>Number of Theories</u>		
Single Theory	14	8
Multiple Theories	148	86
Not Offered	10	6
Totals	172	100
<u>Total Programs for Knowledge Acquisition</u>		
Formal (Diploma/Degree) Education	36	20
Informal (Continuing Education/ Learning Projects) Education	16	9
Combined Formal/Informal Education	127	69
No Knowledge Nursing Theory	4	2
Totals	183	100

Note. All percentages rounded to nearest whole percent.

^aTotals represent 181 respondents, some respondents gave more than one answer.

Table 6

Distribution of Formal Programs from which CE Providers
Acquired Knowledge Related to Nursing Theory

<u>Number Formal Programs</u>	<u>Number</u>	<u>Percentage</u>
One Program	104	56
Two Programs	50	27
Three Programs	11	6
None	22	12
Totals	187	100
<u>M</u>	1.3	
<u>SD</u>	0.7	

Note. All percentages are rounded to the nearest whole percent.

respondents indicated that their formal education did not include nursing theory.

The third indicator, number of nursing theories addressed in the nursing theory content, defined the number of theories studied in the course(s) presented. Table 7 shows a crosstabulation of the number of courses by number of nursing theories included in the formal education of the respondents. That breakdown further identified that multiple theories was the dominant approach to nursing theory content (86% overall) even when the content was offered as a single course (19%). The content focused on a single nursing theory in eight percent of the formal education programs regardless of the number of courses.

The final indicator for the source of knowledge considered in this study related to the total educational programs, formal or informal programs, utilized by the respondents to become knowledgeable about nursing theory. The distribution in Table 5 indicates that more than half of the respondents (69%) relied upon both formal and informal education. Formal education was the highest single source for knowledge acquisition (20%) utilized by the respondents.

Table 7

Crosstab of Number of Courses by Number Theories Included in Formal Education about Nursing theory for CEP Respondents

<u>Number of Courses</u>	<u>Number of Theories</u>					
	<u>Single</u>		<u>Multiple</u>		<u>Not Offered</u>	
	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>
Single Course	4	2	32	19	-	-
More than One Entire Course	2	1	25	15	-	-
Part of Several	8	5	76	45	-	-
Combination		-	12	7	-	-
Not Offered		-		-	10	6
Total	14	8	145	86	10	6

Note. All percentages are rounded to the nearest whole percent, and based on responses from 169 subjects.

One nonnurse CEP respondent commented that the experience of working with nurse faculty who utilized nursing theory had been the source of her knowledge with respect to nursing theory.

Level of knowledge. This area sought information about a respondent's perceptions related to one's level of knowledge for a given nursing theory. Three questions on the survey instrument addressed the level of knowledge. The first survey question asked each respondent to rate one's own level of knowledge from extremely knowledgeable to no knowledge for seven identified theorists with the option to name another theorist.

Table 8 shows the distribution of responses for the identified nursing theories. That distribution suggests that the respondents feel knowledgeable about several nursing theories. Table 8 indicates that a slight majority (54%) of the respondents rated themselves as most knowledgeable about Dorothea Orem's Self-Care Deficit Theory and least knowledgeable about Rosemarie Parse's Man-Living-Health Theory. An itemization of responses in this category appears in Appendix G, Table G-1.

Table 8

Distribution of CEP Respondents' Perceived Level of Knowledge and their Identified Nursing Theorists for which the Respondents Are Most Knowledgeable

Theory	Perceived Level of Knowledge					Number Rspndt	Theorist Most Knowledgeable n	Theorist Most Knowledgeable %
	% Knowledgeable	M	SD	Mode				
Orem, Dorothea: Self-Care Deficit Theory	54	3.4	1.1	4	180	53	32	
Roy, Sister Callista: Adaptations Theory	50	3.4	1.1	4	182	28	17	
Peplau, Hildegard: Interpersonal Relations Theory	36	2.9	1.3	3	179	19	12	
Rogers, Martha: Unitary Man Theory	33	3.0	1.1	3	180	25	15	
King, Imogene: Goal Attainment theory	24	2.7	1.1	3	181	8	5	
Johnson, Dorothy: Behavioral Systems Theory	23	2.6	1.2	3	178	12	7	
Parse, Rosemarie: Man-Living-Health Theory	7	1.8	1.1	1	180	-	-	
Other						19	12	
Total						164	100	

Note. All percentages have been rounded to nearest whole percent.

Note. Knowledge was assessed on a scale from 1 = no knowledge to 5 = extremely knowledgeable.

A second survey question asked respondents to name the theorist for which they were most knowledgeable. The data indicate that the respondents are knowledgeable about several nursing theories representing different perspectives about man and health. According to the distribution in Table 8, it too lists Dorothea Orem as the nursing theorist most knowledgeable to the respondents and Rosemarie Parse as the nursing theorist least knowledgeable to the respondents. Eleven other persons were identified by the respondents (12%) for which they were knowledgeable. That listing appears in Appendix H, Table H-1. This latter table illustrates the number of nursing theorists known by the respondents.

The third research question related to the level of knowledge was addressed by asking respondents to identify the essence of nursing as defined by the nursing theorist for whom they were most knowledgeable. The results of a crosstabulation of the nursing theorists named by the respondents and the essence of nursing appear in Table 9. The results show that the top three theorists identified by the respondents for which they were most knowledgeable were

Table 9

Crosstab and Chi-Square Analysis of Nursing Theorist Most Knowledgeable to CE Providers with the Essence of Nursing for the Theorist

<u>Theorist</u>	Essence of Nursing		Row Totals	Order ^a
	<u>Correct</u>	<u>Incorrect</u>		
Orem, Dorothea	29 60%	19 40%	48	1
Roy, Sister Callista	15 63%	9 38%	24	2
King, Imogene	6 86%	1 14%	7	6
Rogers, Martha	13 65%	7 35%	20	3
Johnson, Dorothy	4 31%	9 69%	13	5
Peplau, Hildegard	7 41%	10 59%	17	4
Column Totals	74 57%	55 43%	129	

Note. ^aRepresents the ordering of correctly matched theorists with theorist named by respondent.

Chi-Square = 8.98

df = 5

p > .05

correctly matched with the essence of nursing by approximately two-thirds of the respondents.

Chi-square analysis of the data, as shown in Table 9, shows no significant relationship between the named theorist and the essence of nursing defined by the theorist. This finding suggests an inconsistency between the respondent's perceived level of knowledge about a nursing theory and the knowledge required to define the essence of nursing as stipulated by the nursing theory.

Beliefs About Nursing Theory

The research questions related to this area were designed to gauge the intensity of beliefs held by the CEP respondents about nursing theory with respect to (a) nursing functions, (b) nursing practice, and (c) nursing theory for establishing nursing as a profession.

Nursing functions. The survey instrument utilized a scale that consisted of five items to gauge the perceived importance of nursing theory to the performance of the identified nursing functions. The distribution depicted in Table 10 suggests that the majority of the respondents (78% plus) rated nursing theory as essential to three nursing

Table 10

Distribution of Perceived Importance of Nursing Theory with Respect to Nursing Functions, Nursing Practice, and to Nursing as Profession

Nursing Function	%	Essential		Mode	Total n Rspnd	Not Imprnt	
		M	SD			%	N
Nursing Process	80	4.2	1.0	5	185	8	15
Pt/Family Teaching	79	4.1	0.9	4	186	6	11
Nursing Decisions	78	4.2	1.0	5	184	6	11
Perform Tasks	57	2.9	1.1	3	185	33	61
Follow MD Orders	35	3.0	1.3	3	186	37	68
<u>Nursing Practice</u>							
Role of Nurse	87	4.4	0.8	5	186	3	5
Area Sole Responsibility	85	4.4	0.8	5	184	4	7
Focus of Nursing	90	4.5	0.8	5	186	3	5
Goal of Nursing	80	4.4	0.8	5	186	2	4
Data Base	83	4.2	0.9	5	185	6	12
Technical Skills	65	3.4	1.1	3	185	18	33
Explain Nursing	77	4.2	0.9	5	186	5	10
Intervention	76	4.1	0.9	5	186	6	11
Pt/Family Roles	83	4.2	0.8	4	185	4	7
Nursing Diagnosis	82	4.3	0.9	5	185	3	6
<u>Nursing as Profession</u>							
Autonomy	94	4.6	0.6	5	181	1*	1
Independence	93	4.5	0.7	5	181	1	2
Generate Knowledge	90	4.5	0.8	5	181	3	5
Control of Practice	91	4.6	0.7	5	181	9	17
Accountability	84	4.4	0.9	5	181	5	9
Social Worth	87	4.4	0.8	5	181	6	3
* less than 1 percent							

Note. All percentages have been rounded to the nearest whole percent.

Note. Each category assessed on a scale from 1 = not important to 5 = essential.

functions. Two items, nursing process and nursing decisions, have a mode of 5.00, the highest value on the scale. The scale also contained two items--performing institutionalized tasks and following medical orders--that nursing theory would exclude from nursing function (Chinn & Jacobs, 1983; Fawcett, 1983; Meleis, 1985; Torres, 1986). A slight majority of the respondents (57%) rated nursing theory as essential to performing institutionalized tasks, while 33% of the respondents indicated that nursing theory was not important to the performance of that nursing function. The final item on the scale, the importance of nursing theory as essential to following medical orders, was rated as essential by 35% of the respondents, while 37% of the respondents rated nursing theory as not important to that function. These findings suggest that the respondents believe that nursing theory impacts upon certain nursing functions, while less support was assigned to delegated functions (33% and 37%).

Nursing practice. The practice of nursing involves a series of activities in the process of assisting others with their actual or potential health problems. The survey instrument contained a second scale, nursing practice,

composed of 10 items to gauge the perceived importance of nursing theory to specific elements of nursing practice. Nursing theory was rated by the CEP respondents as essential for each of the defined elements. The focus of nursing was rated the highest (90%) followed by roles of nursing (87%), while expanding technical skills in nursing was rated the lowest (65%). The distribution appears in Table 10.

Nursing as a profession. Six commonly identified uses of a theory formed the components of the third scale on the survey instrument to gauge the perceived importance of the characteristics of a nursing theory in establishing nursing as a profession. The findings displayed in Table 10 show that each item on the scale was rated by 84% or more of the respondents as being essential to establishing nursing theory as a profession. While no appreciable difference exists between the frequency of responses, the respondents valued autonomy (94%) over independence (93%), followed by control of practice (91%), generate knowledge (90%), social worth (87%), while they valued accountability the least (84%).

Nursing Theory Program Practices

The final area of the survey instrument sought information about the implementation of continuing education programs related to nursing theory. The research questions were designed to gather information about program practices and to gauge perceptions about selected program implementation issues.

Program Practices

This portion of the study sought information about selected components of program design as it related to program offerings that addressed nursing theory. The program practices included four areas: (a) number of nursing theory offerings in relation to total number of offerings, (b) institutional goal for nursing theory, (c) clientele served, and (d) agency approval.

Program offerings. Respondents were asked to identify the total number of continuing education programs offered during the 1987 calendar year. Table 11 shows that distribution. The average number of total programs per agency was 36, while the average number of programs that included nursing theory was six. Of 173 respondents, 49%

Table 11

Programs Offered by CEP Respondents 1987 Calendar Year

	Respondents <u>n</u>	Range	%	<u>M</u>	<u>SD</u>
Total Programs	173	450	100	36	57.6
Nursing Theory	85	98	49	6	12.1
No Theory	88	-	51	-	-

Note. All percentages rounded to nearest whole percent.

indicated that they offered programs that included nursing theory, while 51% reported that they did not include nursing theory.

Institutional goal. This component elicited information relative to the status of an institution's goal for the inclusion of nursing theory in the program offerings. Table 12 presents the distribution of institutional goals for nursing theory. Sixty-four percent of the CEP respondents indicated that their institution had a previously established goal for nursing theory, while eight percent of the respondents reported that for their institution nursing theory was a new goal. Of those CE providers who included nursing theory in their programs, 28% of the respondents reported that the institution has no established goal for nursing theory.

Clientele. This area sought to identify the nurses functioning in different positions in the workplace served by CE programs that included nursing theory. The positions represented two major categories: (a) nurses whose primary responsibilities were related to patients (i.e., staff nurses, nurse managers, and clinical nurse specialists), and (b) nurses whose primary responsibilities were related to

Table 12

Distribution of Institutional Goals for Nursing Theory in CE Programs

<u>Goal</u>	<u>Number</u>	<u>Percentage</u>
Continuation of Established Goal	27	31
Not an Established Goal	24	28
Continuation of Established Goal with New Focus	22	26
New Goal	7	8
Revival of Goal	6	7
Totals	86	100

Note. All percentages are rounded to the nearest whole percent.

the education of nurses. Table 13 shows the rank order of the clientele served. The results indicate that for nurses whose primary responsibility resides with patients, staff nurses ranked first (47%) followed by nurse managers (21%), however, nurse educators (24%) ranked higher than the clinical nurse specialists (8%). The findings indicate that all functional positions are served by nursing theory CE programs.

Agency approval. The survey question asked respondents to identify the agency that approved the continuing education programs. Table 14 presents the agency approval for the CE programs for the 1987 calendar year. Forty-eight percent of the programs were approved by the state nurses' association, followed by state boards of nursing (31%) and the American Nurses' Association (21%).

Implementation Issues

This section of the survey instrument sought information related to planning decisions from the respondents who had offered programs during the 1987 calendar year that included nursing theory. The survey instrument included multi-item scales to gauge the

Table 13

Rank Order of Clientele Served by CE Programs that Include Nursing Theory

<u>Functional Category</u>	<u>Mean Rank</u>	<u>Modal Rank</u>	<u>Percentage Rank</u>		<u>Number Rspnd</u>
			<u>1st Rank %</u>	<u>2nd Rank %</u>	
Staff Nurse	2.3	1	47	14	81
Nurse Manager	2.4	2	21	40	82
Nurse Educator	2.5	3	24	22	79
Clinical Nurse Specialist	2.9	3	8	25	67

Note. All percentages are rounded to the nearest whole percent.

Table 14

Agency Approval for CE Programs 1987 Calendar Year

<u>Agency</u>	<u>Number</u>	<u>Percentage</u>
State Nurses' Association	89	48
State Boards of Nursing	57	31
American Nurses' Association	38	21
Totals	184	100

Note. All percentages have been rounded to nearest whole percent.

respondent's perceptions related to (a) demands for nursing theory, (b) characteristics of a theory, (c) patterns of offerings, and (d) roles that CEPs could perform. Table 15 shows the distribution of the multi-item scales.

Demands for nursing theory. The first scale, demands for theory, included seven statements considered to be important factors towards a decision to include nursing theory in a continuing education program. The scale gauged the importance of those factors on decisions to offer nursing theory. All seven items were rated as essential. The most essential factors to the respondents were nurse educators (68%), followed by perceived changes in the requirements for practice, and the mission statement of continuing education, 67% respectively. American Nurses' Association's Standards and the nursing community were essential to 59% and 57% of the respondents respectively. The least essential factor to the respondents was the nursing practice act (36%), followed by the employer's mission statement (38%).

Characteristics of a theory. The second scale, characteristics of a theory, consisted of nine items to gauge the extent that identified characteristics of a theory

Table 15

Distribution of Planning Decisions Considered by CEP Respondents for CE in Nursing Theory as Related to Demands for Theory, Characteristics of Theory, Patterns of Offerings, and Role Performance

Demand for Nursing Theory	%	Total <u>n</u>	<u>m</u>	<u>SD</u>	Mode
Nursing Community	57	88	3.6	1.2	4
ANA Standards	59	88	3.6	1.1	4
Nurse Practice Act	36	86	2.9	1.3	3
CE Mission Statement	67	86	3.8	1.2	4
Nurse Educators	68	89	3.8	1.1	4
Changes in Practice	67	88	3.8	1.0	4
Employer Mission Statement	38	88	3.0	1.3	3
Characteristics of Nursing Theory					
Ease of Understanding	61	86	3.6	1.1	4
Orientation to Practice	78	87	4.0	0.9	4
Compatibility Own Beliefs	70	85	4.0	1.0	4
Compatibility Medical Model	18	85	2.5	1.1	3
Explains Nursing	76	86	4.0	0.9	4
Orientation to Man	72	85	3.9	1.0	4
Orientation to Health	79	86	4.0	1.0	4
Compatibility Philosophy	60	86	3.7	1.2	4
Ease Application Practice	72	87	3.8	1.0	4

Table 15 continued

Patterns of CE Offerings	%	Total <u>n</u>	<u>m</u>	<u>SD</u>	Mode
Total Program					
Single Theory	16	84	2.2	1.3	1
Total Program					
Multiple Theory	11	82	2.0	1.1	1
Nursing Theory					
Intervention	57	84	3.4	1.1	4
Major Objective					
Clinical Course	50	81	3.4	1.2	3
Total Program					
Apply Theory	35	83	2.9	1.3	3
<hr/>					
Roles Could Perform					
Advocate	52	89	3.5	0.9	4
Facilitator	68	89	3.8	0.8	4
Design Specialist	41	88	3.3	1.1	3
Change Agent	52	89	3.4	1.1	4
Consultant	41	89	3.2	1.1	3
Content Specialist	37	89	3.2	1.1	3

Note. All percentages have been rounded to nearest whole percent.

Note. Each category assessed on a scale where 1 = lowest value and 5 = highest value for adjectives assigned a given scale.

influenced the decision to offer a program that included nursing theory. All items were perceived by the respondents as influencing a decision but the degree of influence varied. Eight of the nine items were rated by 60% or more of the respondents as always influencing the decisions relative to nursing theory. Within that eight, the three most valued characteristics were orientation to health (79%), orientation to existing nursing practice (78%), and explains the phenomenon of nursing (76%). The least important of the nine items was compatibility with the medical model (18%).

Patterns of offerings. The third scale, patterns of CE offerings, identified five methods to offer nursing theory. The scale gauged the usage of the defined modes by CE providers in their programs. The most frequently used methods were associated with clinical nursing courses. A specific nursing theory for a particular nursing intervention (57%) was the most frequently used method, followed by nursing theory as a major objective for each clinical course (50%). Programs to address nursing theory(ies) were less frequently used. In that area, the most frequently used method was as a total program to apply

theory to practice (35%), while the presentation of multiple theories was the least frequently used method (11%).

Role performance. The last scale, role performance, defined six roles commonly identified in the literature as legitimate roles for continuing education educators (Boone, 1985; Knowles, 1980). The scale gauged the perceived competence of CEPs to perform each of the roles if required of the CEP. The respondents indicated they could perform all roles expertly, but the percentage of those CEPs who could perform as experts in each role varied. The order of expert performance by the respondents as displayed in Table 15 is facilitator, advocate, change agent, design specialist, consultant, and content specialists. The ordering suggests that the CEP respondents feel more expert with the planning and logistics of programs than as experts in nursing theory content.

Relationship of Demographic Characteristics to Knowledge, Beliefs, and Practices

The research questions for this area were designed to determine if relationships exist between various aspects of CE providers' knowledge, beliefs, and practices with respect

to nursing theory and the demographic characteristics of education, type of employing agency, and experience.

Source of Knowledge

The survey instrument sought factual information regarding the acquisition or source of knowledge about nursing theory by the respondents. The related question gauged whether or not the level of knowledge, beliefs, and practices of the CEP respondents were associated with their source of knowledge with respect to nursing theory. The factors were analyzed by two statistical methods: Pearson correlation and one-way analysis of variance (ANOVA).

Formal education. As previously defined in the section on the nature of CEP's knowledge, for the variable source of knowledge, one factor is nursing theory in formal education. Findings from the Pearson's correlation presented in Table 16 show that formal education is associated with the (a) respondent's beliefs about the perceived importance of nursing theory to nursing practice ($p < .016$), (b) characteristics of a theory that influence a respondent's decision to offer a nursing theory program ($p < .005$), and

Table 16

Pearson's Correlation of CEP Respondents' Beliefs, Practice Concerns, and Knowledge Related to Experience and Formal Education in Nursing Theory

Variable	Experience		Formal Educ Nursing Theory
	Years RN	Years Prsnt Pos	
Beliefs			
Function	.266	.064	.051
Practice	.191	.193	.016*
Profession	.479	.336	.203
Practice Concerns			
Demand	.251	.337	.221
Characteristics	.268	.461	.005*
Pattern	.076	.378	.095
Roles	.376	.126	.064
Knowledge			
Level of Knowledge	.029*	.048*	.001*

*p < .05

(c) respondent's level of knowledge with respect to nursing theory ($p < .001$).

Total Source of Knowledge

The one-way ANOVA extended the analyses of beliefs, practices, and level of knowledge to all sources of knowledge defined for this study (i.e., formal theory, number of theory courses, and number of theories). The ANOVA further compared the means of the summed scores for the multi-item scales with the indicators for the sources of knowledge. Results indicated that certain components of the sources of knowledge were significant for specific scales measuring the beliefs, practices, and level of knowledge.

Practice beliefs and number of courses. One-way ANOVA indicated a significant difference in the mean scale score of beliefs related to practice depending on the number of courses in nursing theory included in formal education ($F = 4.265, p < .003$). This finding, as shown in Table 17, suggests that respondents differ in their beliefs related to practice according to the number of courses on nursing theory. The lowest practice mean scores occurred for those respondents who had no exposure to or had a single course in

Table 17

One-Way ANOVA Summary Table of Beliefs Related to Practice
with Respect to Number of Courses

<u>Source of Variation</u>	<u>Degree of Freedom</u>	<u>Sum of Square</u>	<u>Mean Square</u>	<u>F Ration</u>	<u>F Prob</u>
Between Groups	4	730.7747	182.6937	4.2651	.0026
Within Groups	164	7024.9413	42.8350		
Totals	168	7755.7160			

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>Std DEV</u>	<u>Minimum</u>	<u>Maximum</u>
1	36	39.7	8.3	18.0000	50.0000
2	27	44.0	6.4	24.0000	50.0000
3	84	43.5	5.8	29.0000	50.0000
4	12	44.2	4.5	36.0000	50.0000
5	10	37.3	7.4	25.0000	47.0000
Total	169	42.4	6.8	18.0000	50.0000

Note. Group refers to number of nursing theory courses where 1 = single course, 2 = more than one entire course, 3 = part of several courses, 4 = combination of courses, and 5 = no theory course.

nursing theory. The highest practice mean scores were attained by those respondents who had multiple exposures through more courses in nursing theory.

Practice beliefs and number of theories. The results of a one-way ANOVA depicted in Table 18 show that respondents differ in their beliefs related to practice according to the number of nursing theories in their formal education ($F = 4.4452, p < .013$). Respondents who had no exposure to nursing theory achieved the lowest practice mean score while those respondents who had multiple theories in the formal education had the highest practice mean scores.

Characteristics of theory and formal education. One-way ANOVA indicated a significant difference in the mean scale score of practice concerns related to the characteristics of a theory depending on the number of formal education programs in nursing theory ($F = 4.349, p < .007$). The findings as shown in Table 19 indicate the characteristics of a theory that influence decisions differ for respondents who have had different formal education in nursing theory. Respondents who had nursing theory in their formal education had higher mean scores on these

Table 18

One-Way ANOVA Summary Table of Beliefs Related to Practice with Respect to Number of Theories

<u>Source of Variation</u>	<u>Degree of Freedom</u>	<u>Sum of Square</u>	<u>Mean Square</u>	<u>F Ratio</u>	<u>F Prob</u>
Between Groups	2	396.5174	198.2587	4.4578	.0130
Within Groups	165	7338.3159	44.4746		
Totals	167	7734.8333			

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>Std DEV</u>	<u>Minimum</u>	<u>Maximum</u>
1	13	41.8	4.7	37.0000	50.0000
2	144	42.9	6.8	18.0000	50.0000
3	11	36.7	7.3	25.0000	47.0000
Total	168	42.4	6.8	18.0000	50.0000

Note. Group refers to number of theories presented in course content where 1 = single theory, 2 = multiple theories, and 3 = no theory.

Table 19

One-Way ANOVA Summary Table of Characteristics of Nursing Theory with Respect to Formal Education

<u>Source of Variation</u>	<u>Degree of Freedom</u>	<u>Sum of Square</u>	<u>Mean Square</u>	<u>F Ration</u>	<u>F Prob</u>
Between Groups	3	471.5988	157.1996	4.349	.0062
Within Groups	82	2963.9942	36.1463		
Totals	85	3435.5930			

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>Std DEV</u>	<u>Minimum</u>	<u>Maximum</u>
0	5	24.2	13.4	9.0000	43.0000
1	52	33.1	5.7	15.0000	44.0000
2	24	34.4	4.7	22.0000	41.0000
3	5	35.8	3.9	31.0000	41.0000
Total	86	33.1	6.4	9.0000	44.0000

Note. Group refers to the number of formal programs in which a respondent had nursing theory where 0 = no formal program, 1 = one formal program, 2 = two formal programs, and 3 = three formal programs.

variables than respondents who did not have nursing theory in formal education.

Level of knowledge and formal education. Results of a one-way ANOVA shown in Table 20 indicate that respondents differ in their level of knowledge according to their formal education ($F = 3.285, p < .022$). The lowest mean scores for the level of education were achieved by respondents who had no formal education in nursing theory or who had nursing theory in one formal education program. The highest mean scores for the level of education were attained by respondents who had nursing theory in more than one formal education program.

Level of knowledge and experience. As previously stated in the section on demographic characteristics, education was categorized as nursing and nonnursing. The Pearson correlation depicted in Table 16 shows that the level of knowledge is associated with both indicators of experience (i.e., total years as a registered professional nurse $p < .029$, and years in present position $p < .048$).

Level of knowledge and employment. One-way ANOVA indicated a significant difference in the mean scale score

Table 20

One-Way ANOVA Summary Table of Level of Knowledge with Respect to Formal Education

<u>Source of Variation</u>	<u>Degree of Freedom</u>	<u>Sum of Square</u>	<u>Mean Square</u>	<u>F Ratio</u>	<u>F Prob</u>
Between Groups	3	326.0851	108.6950	3.2849	.0222
Within Groups	172	5691.2728	33.0888		
Totals	175	6017.3580			

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>Std DEV</u>	<u>Minimum</u>	<u>Maximum</u>
0	16	18.1	5.5	7.0000	29.0000
1	100	18.9	6.4	7.0000	35.0000
2	49	21.3	4.2	11.0000	31.0000
3	11	22.7	5.8	12.0000	33.0000
Total	176	19.7	5.9	7.0000	35.0000

Note. Group refers to number of formal programs in which a respondent had nursing theory where 0 = no formal program, 1 = one formal program, 2 = two formal programs, and 3 = three formal programs.

related to level of knowledge depending on the type of employment ($F = 19.319, p < .000$). This finding, displayed in Table 21, suggests that respondents in hospital and schools differ in their level of knowledge. Respondents employed by schools achieved higher mean scale scores for the level of knowledge than respondents employed by hospitals.

None of the other F ratios by this analysis were significant. The summary table for all variables analyzed by the one-way analysis of variance appears in Appendix I.

CEPs' Differences Related to Programs

Another component of interrelationships is the difference between CEPs associated with program type. It refers to (a) CE programs that did not include nursing theory and (b) CE programs that included nursing. The research questions addressed differences in (a) knowledge, (b) beliefs, and (c) demographic characteristics between CEPs from the two groups of programs. Differences were determined by one of two analyses, depending upon the level of measurement of the variable. The t test of the means was computed for the interval variables, which included the

Table 21

One-Way ANOVA Summary Table of Level of Knowledge with Respect to Employment

<u>Source of Variation</u>	<u>Degree of Freedom</u>	<u>Sum of Square</u>	<u>Mean Square</u>	<u>F Ratio</u>	<u>F Prob</u>
Between Groups	1	604.4072	604.4072	19.3190	.0000
Within Groups	173	5412.4271	31.2857		
Totals	174	6016.8343			

<u>Group</u>	<u>Count</u>	<u>Mean</u>	<u>Std DEV</u>	<u>Minimum</u>	<u>Maximum</u>
1	89	17.9	5.9	7.0000	31.0000
2	86	21.6	5.2	9.0000	35.0000
Total	175	19.7	5.9	7.0000	35.0000

Note. Group refers to type of employing agency where 1 = hospitals and 2 = schools.

multi-item scales for level of knowledge, beliefs, and the demographic variable of experience. A crosstabulation utilizing the chi-square statistic compared the two groups for all other variables related to knowledge and to the demographic characteristics.

Knowledge. As previously discussed under the section on the nature of CEPs knowledge, knowledge was defined by two dimensions: (a) the level of knowledge, and (b) the source of knowledge. The t test analysis, which appears in Table 22, indicates a significant difference in the CEPs' perceived level of knowledge for specific nursing theories between the two groups ($t = 2.86$, $df = 172$, $p < .005$). The chi-square analyses, as shown in Table 23, for the other factors related to the level of knowledge show no significant differences between the two groups using the .05 significance level.

For the variables that define the source of knowledge, which appears in Table 23, significant differences between the groups exist for the number of theory courses in formal education (chi-square = 10.80, $df = 4$, $p < .029$, Cramer's $V = .259$), the number of theories addressed in the content (chi-square = 6.11, $df = 2$, $p < .047$, Cramer's $V = .195$), and for formal/informal sources of knowledge acquisition

Table 22

T Test Analysis of Mean Scores for Selected Multi-Item Scales and Demographic of Experience Between CEP Respondents who Offered CE Programs without Nursing Theory and Those CEP Respondents who Offered Nursing Theory Programs

<u>Variable</u>	<u>t value</u>	<u>df</u>	<u>Level of Significance</u>
Beliefs			
Nursing Functions	3.88	172	.000*
Nursing Practice	3.57	161	.000*
Nursing Profession	2.26	157	.025*
<hr/>			
Level of Knowledge	2.86	172	.005*
<hr/>			
Experience			
Years Prof Nurse	2.01	170	.046*
Years Present Position	1.22	171	.222

Note. Where $p < .05$ for F-test separate sample t test used. Where $p > .05$ for F-test pooled t test was utilized.

* $p < .05$

Table 23

Chi-Square Analysis of Responses According to Knowledge and Selected Demographics Between CEP Respondents who Offered CE Programs without Nursing Theory and Those CEP Respondents who Offered Nursing Theory Programs

<u>Variable</u>	<u>Programs</u>		<u>Chi Square</u>	<u>Cramer's V</u>	<u>df</u>	<u>Lvl of Signif</u>
	<u>CEP Program Rspndt %</u>	<u>Theory Program Rspndt %</u>				
Level of Knowledge						
Theorist Most Knowledgeable	50	50	5.352	.187	6	.499
Essence of Nursing	53	47	7.364	.233	8	.498
Source of Knowledge						
Nursing Theory						
Formal Programs						
Diploma	47	53	.057	.018	1	.811
Assoc. Degree	47	53	1.995	.147	1	.157
Baccalaureate	47	53	.091	.023	1	.763
Graduate	47	53	.069	.020	1	.793
Doctorate	47	53	.072	.020	1	.788
Other	47	53	.185	.033	1	.667
Theory Courses	48	52	10.801	.259	4	.029*
Number of Theories	48	52	6.114	.195	2	.047*
Formal/Informal Sources	48	52	27.832	.405	7	.000*
Demographics						
Education	48	52	4.263	.158	1	.039*
Type of Employing Agency	48	52	.589	.058	1	.443

Note. All percentages are rounded to the nearest whole percent.

* $p < .05$.

(chi-square = 27.83, df = 7, $p < .000$, Cramer's $V = .405$). Limited associations exist for the three variables. The results in Table 23 also show that no significant differences exist between the groups for the other variables that define the source of knowledge using the .05 significance level.

Beliefs. As previously discussed under the section on beliefs about nursing theory, beliefs addressed the importance of nursing theory for : (a) specific nursing functions, (b) nursing practice, and (c) the characteristics of a nursing theory in establishing nursing as a profession. The t test analysis, as shown in Table 22, indicates that significant differences exist between the groups for each of the variables defined for beliefs.

Demographic characteristics. This variable was subdivided into three areas: (a) highest level of education, (b) type of employing agency, and (c) experience. The chi-square analysis, as shown in Table 23, shows a significant difference between CEP respondents with respect to education, which was categorized as nursing and nonnursing, (chi-square = 4.24, df = 1, $p < .039$, Cramer's $V = .158$) and suggests limited association. The results

also show no significant difference between the groups with respect to the type of employing agency (i.e., hospitals and schools) using the .05 significance level. Experience was defined by two factors: (a) years as a professional registered nurse, and (b) years in present position. The results of the t test of the means for these factors, which appears in Table 22, indicate a significant difference between the groups with respect to years as a professional nurse ($t = 1.22$, $df = 170$, $p < .046$), but no significant difference exists between the groups with respect to years in present position using the .05 significance level.

Reasons for the Exclusion of Nursing Theory

The final item on the survey instrument elicited significant reasons that nursing theory, a new approach to nursing, is excluded from continuing education programs by the respondents. The distribution of the reasons listed by the respondents appears in Appendix J.

The reasons cited were categorized into four variables known to influence the adoption of new ideas (Glaser, Abelson, & Garrison, 1983). The selected categories are (a)

value, (b) ability, (c) stability, and (d) timing. Value represents the agreement between a potential user's existing values, cultural norms, and attitudes towards nursing practice and the perceived values generated by nursing theory for nursing practice. Ability designates the human and fiscal resources necessary to implement and sustain efforts towards an innovation. Stability is the commitment to previously established goals. Timing is the willingness to try nursing theory.

Table 24 presents the categories and their distribution. The results show that the category, value, comprises the largest segment of reasons followed by ability, stability, and timing. The most frequently listed single reason was clinical/technical skills (17%). It was categorized as an indicator of stability which is consistent with the past commitments of continuing education to maintain competencies for nursing practice that follows the medical model. For the last category, timing, future plan was the only reason placed in the category. Six respondents indicated that consideration is being given to nursing theory for their CE programs.

Table 24

Categories and Distribution of Reasons Given by CEP
Respondents to Exclude Nursing Theory from CE Programs

<u>Category</u>	<u>Number</u>	<u>Percentage</u>
Values		
Lack of Interest from Nurses	16	14
No Priority Nurse Manager	15	13
Needs Assessment for CE	11	10
Not Valued as Requirement	10	7
Subtotal	52	46
Ability		
Resources	16	14
Education	12	10
Available other Sources	2	2
Subtotal	30	26
Stability		
Requirements		
Clinical/Tech Skills	20	17
Program Not Appropriate	4	3
Other Priorities	4	3
Subtotal	28	23
Timing		
Future Plans to Offer Programs	6	5
Subtotal	6	5
Totals	116	100

Note. All percentages have been rounded to nearest whole percent.

Table 25 further describes the distribution of the number of reasons listed by the respondents. Most of the respondents, 48% or 50 of the respondents, gave a single reason, while 30 respondents (29%) cited two reasons for excluding nursing theory.

Summary

Analysis of the data in this chapter included a discussion of the demographic characteristics of the CEP participants, and an examination of the findings and tentative conclusions related to the specific research questions. The research questions addressed the nature of the knowledge, beliefs, and program practices of the CEP respondents with respect to nursing theory. These areas were discussed in relation to their interrelationships and in terms of the demographic characteristics of education, type of employing agency, and experience. Tables were presented to support the findings. Chapter five concludes with a summary of the background, problem, and findings, conclusions and discussions of the results, and recommendations that result from the study.

Table 25

Distribution of Number of Reasons Listed by CEP Respondents
for Excluding Nursing Theory in CE Program

<u>Number of Reasons</u>	<u>Number</u>	<u>Percentage</u>
Single Reason	50	48
Two Reasons	30	29
Three Reasons	2	2
No Response	23	22
Totals	105	100

Note. All percentages have been rounded to nearest whole percent.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter presents a summary of the study, conclusions drawn from the study, and offers recommendations for further study.

Summary

Historically, formal nursing education in this country imitated the medical model. Physicians delegated tasks to nurses, defined the content required for nurses, and owned the hospitals, which offered the first programs to prospective nurses. The control emanating from that beginning has continued to dominate nursing education and nursing practice.

This study evolved from social and legislative changes--the wellness movement, the corporatization of the health care delivery system, and the feminist movement--that are impacting upon the health care delivery system and are challenging the nature of nursing, its focus and purpose, and its dependence on the medical model. For nursing education and nursing practice to move towards

professionalization, nursing must break its dependency upon the medical model and define its own domain of practice.

The literature indicates that many nurse-scholars believe that nursing theory--which reconceptualizes nursing, defines the body of knowledge, and enunciates the area of sole responsibility for nurses--enables the practitioners of nursing to make the transition to an independent realm of practice. However, to accept that new dimension of nursing practice, nurses must be educated to utilize nursing theory in nursing practice.

Continuing education (CE) in nursing historically has been that component of nursing education responsible for maintaining nursing competencies. It does so by disseminating new information that impacts upon nursing practice to nurses in the workplace. The practice of nursing changes to the extent that programs regarding innovations are available to those nurses in the practice setting. For nursing practice to change from the medical model, nursing theory is an innovation that must be disseminated to the majority of nurses in the practice setting. The literature suggests that they have been educated by the medical model.

In this study, continuing education providers (CEP) were regarded as a special type of change agent who have a responsibility to link nursing theory to those nurses in practice settings whose education did not include nursing theory.

The problem addressed by this study was the extent to which nursing theory was disseminated through CE programs in nursing. The major research question was: To what extent do selected CEPs address nursing theory in CE offerings, and what factors were associated with decisions about nursing theory for CE offerings?

A descriptive survey was conducted. Data were collected by an investigator developed self-administered questionnaire from selected CEPs. Subjects were CEPs who had offered CE programs approved by one of the following: (a) American Nurses' Association, (b) a state nurses' association, or (c) a state board of nursing during the 1987 calendar year. Subjects were employed by hospitals or schools, which included colleges and universities. The sample was drawn from CEPs from 38 of the continental United States. From the known population of 575 approved CEPs, 300 subjects were selected by two procedures: census and simple random

sampling. A census of the 140 CEPs from schools formed one group of subjects; the second group was a simple random selection of 160 CEPs from the 435 CEPs employed by hospitals.

Findings

The results of the study were based on responses from 187 continuing education providers of which 91 respondents (49%) were from schools (i.e., colleges and universities) and 96 respondents (51%) were from hospitals.

Nature of CEP's knowledge. The CEPs gained knowledge with respect to nursing theory from all levels of formal education (diploma/degree) with the majority of the respondents (60%) having nursing theory in their masters program. The usual pattern was to have nursing theory in one formal education program (56%).

Nursing theory was presented to them most frequently as part of several courses (49%); however, a single course (22%) or several entire courses (16%) on nursing theory were offered in some educational programs. Multiple theories was the dominant approach in the course offerings (86% overall) even when the content was offered as a single course (16%).

For both the number of theory courses and the number of nursing theories addressed, six percent of the CEP respondents indicated that their formal education did not offer nursing theory.

Percentages for each of the specified nursing theories indicate that the respondents were knowledgeable about several nursing theories representing different perspectives about man and health, but varied in the perceived level of knowledge among the nursing theories. The ordering of the perceived level of knowledge was Self-Care Deficit Theory (54%), Adaptation Theory (50%), Interpersonal Relations Theory (36%), Unitary Man Theory (33%), Goal Attainment Theory (24%), Behavioral Systems Theory (23%), and Man-Living-Health Theory (7%). Additionally, 12% of the respondents indicated that they were knowledgeable about other nursing theories; however, 11 other persons were named, which included nurse-leaders who have no published nursing theory and Malcom Knowles.

Two-thirds of the respondents correctly matched the essence of nursing with the top three identified nursing theorist--Dorothea Orem's Self-Care Deficit Theory, Sister Callista Roy's Adaptation Theory, and Martha Rogers's

Unitary Man Theory--for whom they were most knowledgeable. No significant relationship existed between the theorist named and the essence of nursing (chi-square = 8.98, df = 5, $p < .05$).

Beliefs about nursing theory. Beliefs related to the perceived importance of nursing theory for nursing functions, nursing practice, and nursing as a profession were assessed by multi-item scales. The majority of the respondents (75% or greater) rated nursing theory as essential for certain nursing functions, those functions that could be initiated by nurses and were supported by nursing theory literature, but less agreement existed among the respondents for delegated functions (57% or less). A similar finding occurred for the second scale, nursing practice. The scale defined expected outcomes from nursing theory upon nursing practice. Nine of 10 items were rated as essential by 75% of the respondents while the one item not supported by nursing theory literature was rated as essential by 60% of the respondents. The last scale, nursing as a profession, included six characteristics of a theory deemed by nurse-scholars to be essential for establishing nursing as a profession. Each item on the

scale was rated as essential by the respondents (84% or greater).

Nursing theory program practices. Of all CE programs offered during the 1987 calendar year, the total number of programs without nursing theory (51%) exceeded by a slight majority the number of programs that included nursing theory (49%). On the average, six CE programs in other subject areas were offered for each nursing theory program. State nurses associations approved half of all CE programs (48%) followed by state boards of nursing (31%) and the American Nurses' Association (21%).

Specific goals related to the offering of nursing theory programs existed for the majority of the institutions (72%), while 28% lacked established goal. For the defined functional positions, nursing theory CE programs served all positions, but the most frequently served were those nurses whose primary responsibilities were related to patient care (76%).

Implementation issues. For CEPs' who offered nursing theory programs, perceptions were measured by multi-item scales for four areas of concern: (a) demands for nursing theory, (b) the characteristics of a theory that influenced

a decision, (c) patterns of program offerings, and (d) roles that CEPs feel competent to perform if required.

Demands for nursing theory included commonly identified sources from which needs emerge for program offerings. The majority (50% or greater) of the factors were rated as essential, while two sources--nurse practice act and employer mission statement--were perceived to be less essential towards a decision to include nursing theory in a CE program.

Characteristics of a theory defined nine attributes of a theory that might influence a decision to offer nursing theory programs. Eight of the nine factors, which described the relative advantage of a theory, were rated by the respondents (60% or greater) as always influencing their decision. The one trait--compatibility with the medical model--that was not supported by nursing theory literature was rated similarly by 18% of the respondents.

The patterns of program offering identified five ways that nursing theory could be presented. The most frequently used methods were the inclusion of nursing theory as part of a program for a particular nursing intervention (57%), or as a major objective of a clinical course (50%). Specific

programs for diffusing nursing theory were less frequently offered (16% or less).

The last component of the implementation issues dealt with roles that CEPs feel competent to perform. The ordering for the perceived competence to expertly perform was facilitator (68%), advocate and change agent (52%), design specialists and consultant (41%), and content specialist (37%).

Relationships. To measure the extent of relationships among various aspects of CEPs' knowledge, beliefs, and practices with respect to nursing theory, analyses were made between the source of knowledge, demographic characteristics, and program types (i.e., programs that included nursing theory and programs that did not include nursing theory).

Pearson's correlation indicated a significant positive association between having nursing theory in formal education and (a) beliefs related to nursing practice ($p < .016$), (b) the level of knowledge ($p < .001$), and (c) between the characteristics of a theory that influence a decision regarding nursing theory programs ($p < .005$). One-way analysis of variance (ANOVA) of the mean scale scores

for CEPs' beliefs showed significant differences in nursing practice beliefs when categorized according to the number of nursing theory courses ($F = 4.265, p < .003$), and to the number of theories in a course ($F = 4.445, p < .013$). ANOVAs for the mean scale scores for the level of knowledge and the characteristics of a theory that influenced a decision about nursing theory revealed that the CEPs' scores for both scales were significantly different when classified according to the number of formal education programs in which the CEP respondent had nursing theory ($F = 3.285, p < .022, F = 4.349, p < .007$, respectively).

The scales for the beliefs, practices, and the level of knowledge were analyzed further according to the demographic characteristics (i.e., education, type of employing agency, and experience). Pearson's correlation indicated a significant relationship between the level of knowledge and both indicators for experience (i.e., total years as a registered professional nurse $p < .029$, and years in present position $p < .048$). The ANOVA showed a significant difference in the mean scale score for the level of knowledge when compared according to type of employing agency ($F = 19.319, p < .000$). No other significant

relationships were found between the demographic characteristics using the .05 significance level.

Comparisons were made between the CEPs' knowledge, beliefs, and demographic characteristics according to program type (those programs that included nursing theory with those programs that did not).

Differences existed for four of the knowledge variables when classified by program type. They were (a) perceived level of knowledge ($t = 2.86$, $df = 172$, $p < .005$) (b) number of theory courses in formal education programs (chi-square = 10.801, $df = 4$, $p < .029$, Cramer's $V = .259$), (c) the number of theories addressed in the content (chi-square = 6.11, $df = 2$, $p < .047$, Cramer's $V = .195$), and (d) formal/informal sources of knowledge acquisition (chi-square = 27.832, $df = 7$, $p < .000$, Cramer's $V = .405$).

Significant differences existed between program type and beliefs. The t test of the mean scale scores for beliefs were (a) importance of nursing theory related to nursing functions ($t = 3.88$, $df = 172$, $p < .000$), (b) importance of nursing theory to nursing practice ($t = 3.57$, $df = 161$, $p < .000$), and (c) beliefs related to the characteristics of a

theory to establish nursing as a profession ($t = 2.26$, $df = 157$, $p < .025$).

Significant differences existed between program type and the demographic characteristics of education and one indicator of experience. Education as indicated by the highest level of education in nursing or nonnursing differed for respondents when categorized by program type (chi-square = 4.236, $df = 1$, $p < .039$, Cramer's $V = .158$). A similar finding was found for one measure of experience, years as a registered professional nurse ($t = 1.22$, $df = 170$, $p < .046$).

Reasons nursing theory excluded. The most frequently cited single reason (17%) for excluding nursing theory was the requirement for clinical/technical skills. The largest single category of reasons was related to values, the compatibility between existing values and those perceived from nursing theory (46%) followed by the ability to provide programs (26%), stability, the commitment to established goals (23%), and timing, willingness to try nursing theory (5%).

Conclusions

The thesis of the study is that as nursing moves towards professionalization, it must establish its own domain through the development and utilization of nursing theory in both nursing education and nursing practice. For those nurses whose formal education has not included nursing theory, continuing education is that arm of the nursing educational system charged with the responsibility to disseminate nursing theory in the workplace. From the results of this study, several conclusions emerge regarding the present status of nursing continuing education as an agency for diffusing nursing theory. A discussion of the findings for each of the research questions and the conclusions follow.

Nature of CEPs' Knowledge

The findings indicate that the CEP respondents possess varying degrees of knowledge derived from both formal and informal sources, but for some CEPs the knowledge does not enable them to apply or to determine salient differences between the theories. The extent of the knowledge varied from no knowledge to knowledge about multiple nursing

theories, attained in one-or-more courses, and acquired from all levels of formal education with the masters level being the dominant source. Percentages for each of the specified nursing theories indicate that the perceived knowledge spanned different perspectives about man and health, while the essence of nursing was correctly matched with the top three identified nursing theorists by two-thirds of the respondents. No relationship was found between the theorist named and the essence of nursing. Additionally, the naming of persons who have no published nursing theory or whose major works are in another field, raises doubts about the depth of the acquired knowledge.

The absence of knowledge for those CEPs whose educational focus is nursing may be attributed to the time of the educational experience as was identified in comments on returned questionnaires. Curricula for nursing education are influenced by accreditation standards and nurse practice acts. Conceptual frameworks for curricula, the forerunner of nursing theory, were not required for the accreditation of programs leading to baccalaureate and higher degrees in nursing until 1972 (National League for Nursing [NLN], 1972); nursing theory became an accreditation requirement

for those programs in 1983 (NLN, 1983). Mandates from statutory changes in nurse practice acts occurred in the late 1970s (La Bar, 1984). For those CEP respondents whose educational focus is nonnursing, an explanation may be the reliance on the biomedical model, whereby nurses who sought higher education pursued one of the supporting disciplines (Meleis, 1985).

For those CEP respondents who have had nursing theory in formal education programs, the discrepancies in their answers point to the adequacy of the knowledge attained in such programs. Nursing theory offerings in formal education have presented overviews of nursing theories (Fawcett, 1984; Meleis, 1985). The evidence suggest that most of the respondents learned about nursing theory at the masters level. The graduate level of education has emphasized critiques of nursing theory (Fawcett, 1984; Meleis, 1985) with limited opportunities to utilize nursing theory in nursing practice (Meleis, 1985). The number of research studies that have tested and verified the concepts and propositions of the recognized nursing theories has been limited (Silva, 1986). Such emphases raises questions about the level of the knowledge conveyed.

Rogers (1983) describes three forms of knowledge required for the innovation-decision process. The first, awareness, is the recognition of the existence of an innovation. How-to knowledge is the necessary information to properly use an innovation or idea. The last form, principle knowledge, deals with the rationale underlying the innovation. The identified discrepancies in the knowledge lends support to differences in the form of knowledge possessed by the respondents. The formal offerings have generated awareness knowledge for some respondents without sufficient information for the application and discernment of salient differences between theories.

Beliefs about Nursing Theory

The findings indicate that the majority of the respondents perceive nursing theory as a relative advantage, an improvement over the existing situation, for selected nursing functions, nursing practices, and for establishing nursing as a profession. The negative responses of each of the scales as well as the perceived importance for the three items not supported by nursing theory may be attributed to traditional beliefs. Such beliefs define nursing as task

performance under the protective mantle of paternalism, which gives the control of nursing to others, fosters dependency, and discourages nursing from developing its own domain.

Another explanation may be the beliefs associated with nursing theory development and the acceptance within the nursing community. Controversy about the need for nursing theory (Meleis, 1985) and the presence of nursing theory (Fawcett, 1984; Jennings, 1987; Torres, 1986) has plagued nursing theory development. Other nurse-scholars have questioned whether there truly is a uniqueness to nursing that separates it from other disciplines; they advocate the utilization of theories from other discipline to define nursing (Crawford, Dufult, & Rudy, 1979; Fawcett, 1983; Johnson, 1986). Some nurses continue to believe that nursing is at a preparadigm stage (Fawcett, 1984; Hardy, 1983, 1987), while other nurses have accepted the formulations as nursing theory (Meleis, 1985; Parse, 1987; Silva, 1986; Stevens, 1983). A few respondents commented that they did not believe that nursing is at the theory stage, while another small group commented that nursing theory adds confusion.

According to Rogers (1983), for beliefs to result in relative advantage, the acquired knowledge must be sufficient to affect an attitudinal change; otherwise, the potential user will remain at the knowledge level. It seems that in a few isolated instances the knowledge of specific factors has not resulted in a change in beliefs.

Nursing Theory Program Practices

Several conclusions emerge regarding program practices with respect to nursing theory.

Program offerings. Approximately one-half of the respondents include nursing theory in CE programs; such programs originate from agencies with institutional goals committed to nursing theory. Given that the overall majority of the CEPs had some knowledge of nursing theory and had formulated positive beliefs about nursing theory, which are requisites for adoption of innovations (Rogers, 1983), the expectation would be that more than 49% would have offered nursing theory programs. The adoption of innovations occurs in the context of a social system (Rogers, 1983). As employees, the respondents are members of a social system. The position of nurses within such

systems may cause CEPs who have knowledge of and positive beliefs about nursing theory to defer acting as change agents if the respondents perceive the lack of social support (Rogers, 1983). Too, the lack of programs may reflect the CEPs' perceived competency to act as consultant or content specialists to recommend programs that require attitudinal or policy changes within a social system.

Demands for theory. The majority of the respondents perceived the needs emanating from nursing sources as more essential to a decision than needs from nonnursing sources. In the innovation-decision process, as one moves from the belief stage to the decision stage, interpersonal communication or social reinforcement is important for the clarification of concerns related to an innovation (Rogers, 1983). Thus, shared experiences with nurses may be valued over those needs imposed from management or public officials. The latter may also reflect the level of involvement of the respondents in external controls of nursing.

Characteristics of a theory. The majority of the CEPs were influenced by those features of a theory associated with relative advantage or compatibility. Such findings

support Rogers's (1983) claim that the attributes of an innovation favor adoption. The inclusion of a theory's compatibility with the medical model again highlights the difficulty for some nurses to separate nursing from medicine.

Patterns of offerings. The majority of the respondents perceived continuing education's function in disseminating nursing theory as its application to nursing practice rather than as a primary source for basic knowledge about nursing theory as evidenced by the infrequency (16% or less) of programs devoted to nursing theory. The finding reflects organizational readiness. The application of nursing theory in small increments as part of a course serves as a "trial run" before making a major change. It also allows for modification to be made for a particular group, especially if some awareness exist. Such actions favor adoption (Rogers, 1983).

Roles. The CEP respondents believed they were competent to perform multiple roles at various points in the innovation-decision process, but they believed they were more competent to expertly perform those roles associated with planning or adjunct roles rather than as consultants or

content specialists. Such findings may represent the usual roles that CEPs perform in their respective agencies given the frequency of other programs, a ratio of one-to-six, or to time spent on other duties. Rogers (1983) claims that a change agents success is positively related to the extent of effort.

Goals. Both hospitals and schools recognized that nursing should be separated from medicine and have progressed to the confirmation stage of the innovation-decision process as evidenced by their commitment to nursing theory by having specific goals (72%) to address nursing theory. Programs offered in the absence of an established goal (28%) further attest to the importance of organizational support.

According to Rogers (1983), at the point of confirmation further decisions regarding nursing theory programs will be made. Some agencies have engaged in such decision-making. They have reconfirmed their commitment to nursing theory programs as demonstrated by the continuation of goals (27%), continuation of established goal with a new focus (22%), and the revival of a goal (6%).

Clientele. Nursing theory programs attracted innovators, persons seeking information about a new idea, from all functional positions. Those nurses (76%) whose primary responsibility was related to patient care were most frequently served by nursing theory programs. As potential users, the acquisition of knowledge about nursing theory enhances the ability of those nurses to change nursing practice. Innovators are more apt to utilize an innovation earlier than persons who fail to seek information (Rogers, 1983).

Relationships to Nursing Theory

A CEP's exposure to nursing theory partially determined the nursing practice beliefs, the characteristics of a theory that influenced a decision, and the perceived level of knowledge for specific nursing theories. Significant differences were found for each of these factors when categorized by formal programs, number of courses, and number of theories. The findings underscore Rogers's (1983) premise that knowledge has different forms and that knowledge about an innovation affects other stages of the innovation-decision process.

Demographic Characteristics

The more cosmopolite a CEP the greater the level of knowledge. Cosmopolitaness is the extent to which an individual goes beyond his local situation for guidance and satisfaction. It includes personal and social characteristics (Rogers, 1983). The findings of the study indicated that the level of knowledge differed when categorized by experience and type of employing agency. Experience allows an individual to recognize limitations of existing situations while extending one's contacts and opportunities. The average number of years as a registered professional nurse (22.1) and the average number of years in the present position (6.4) indicated that opportunities existed for personal growth and greater social contacts. The movement from a beginning position in nursing to continuing education in nursing suggests upward mobility, a trait of cosmopolitaness.

Differences in the level of knowledge related to type of employing agency may be attributed to the mission of the employing institution. Colleges and universities are oriented to learning and to exploring and developing ideas within and among disciplines, while hospitals are committed

to the care and management of persons with illness. The broader focus of schools enhances cosmopolitaness.

Program Differences

Those CEP respondents who offered nursing theory programs were more cosmopolite than those CEP respondents who did not offer nursing theory. Such persons are more innovative, have greater knowledge of innovation, are better educated, have more favorable attitudes towards innovations, and are less resistive to change (Rogers, 1983). The findings of significant relations between program types and the sources of knowledge, beliefs about nursing theory, the level of knowledge, experience, and education support that conclusion.

Reasons for Excluding Nursing Theory

The CEP respondents who did not include nursing theory are likely to be laggards as adopters of innovations (Rogers, 1983). Those persons exhibit resistance to change, tend to make decisions in terms of past decisions, have limited resources, have limited knowledge about innovations, and they hold to traditional views and practices. The findings indicated that the respondents failed to see a

relative advantage to nursing theory, lacked resources, and were committed to other programs. A few commented that their own knowledge was insufficient to develop programs; others mentioned that the level of knowledge of the potential users were barriers to nursing theory. In those instances, the CEPs fail to appreciate their role for initiating knowledge to create awareness related to an innovation for change to occur.

Recommendations for Further Research and Diffusion

The following recommendations are suggested for further research and the dissemination of nursing theory.

1. Given that CEP respondents from hospitals and schools have presented nursing theory programs, a study of the organizational structure, restructuring, activities, and resources of nursing divisions within both institutional types should be done to uncover those factors that promoted adoption within a particular social system. The transmission of such information to those institutions that have not offered nursing theory programs should facilitate their process.

2. The associations found in this study between knowledge and beliefs warrant a follow-up study of clientele served to determine the effect of nursing theory knowledge attained from CE programs. Significant aspects of the study should be changes related to (a) beliefs associated with nursing theory, (b) nursing practices, (c) motivations for attendance (i.e., requirements for continuing education units versus the separation of nursing practice from the medical model), and (d) the amount of exposure to include the method of exposure and the length of the exposure. The findings should assist in determining the most expedient means for future program offerings and their impact on nursing practice.

3. This study indicated that CEPs possess the competencies to perform a variety of roles as change agents related to nursing theory. Success of change agents is related to the effort spent and to their position within an organization (Rogers, 1983). With the current emphasis on cost containment in health care management, a study of the roles and functions of CEPs should be done. Comparisons should be made between the perceptions of the CEP and the chief nurse administrator or the counterpart in a different

organizational structure. Such a study should address the perceived expected roles, actual roles and conditions under which they are performed, opportunities for innovations , time allocation to prior commitments, and the time allocation to innovations. The results would be useful to determine if CEPs are perceived as agents for change within organizations.

4. Institutions with educational programs that offer nursing theory in credit and noncredit formats should re-evaluate the purpose, specific content, and the expected outcomes for the offering to determine if the outcomes are adequate for the participant to utilize the knowledge gained. The results should dictate the required changes to ensure that sufficient knowledge is transmitted for the enhancement of nursing.

5. The Council on Continuing Education of the American Nurses' Association has been charged by the association to identify standards for CE, to determine the associations' role in CE, and to provide leadership to its constituents through the implementation of new plans of action or the revision of previous plans (ANA, 1984). In keeping with that responsibility, the Council has included theory

development in the standards for CE. It should become more assertive in its role for the diffusion of nursing theory, which is a component of the national agenda in nursing. The Council should develop mechanisms to assist state and local constituents in their efforts to disseminate nursing theory and to implement its practice. Providers whose knowledge and resources are limited could be assisted through state and local programs.

6. The findings indicate that continuing education providers most frequently offer nursing theory as part of a program for a particular nursing intervention or as a major objective of a clinical course. Recognizing the constraints upon continuing education, it is suggested that such practices be continued but expanded to include strategies to explore how nursing theory application (a) clarifies nursing practice, (b) differs from medicine, and (c) advances the profession.

7. The instrument utilized in this study was restricted to content validity, which limits its predictor usefulness. Further development of the instrument is warranted. Three separate studies are proposed. First, a delphi study among nurse educators from each segment of the nursing educational

system and from nurse administrators should be done to expand and refine the items for each scale of the instrument. Following the completion of the delphi study, a second study should be conducted utilizing factor analysis to determine factor structure for each scale. Finally, a study employing the refined instrument should be done to determine the predictive ability of each scale with respect to program offerings in nursing theory.

8. For those basic and graduate nursing education programs accredited by the National League for Nursing that have a continuing education component, the association should establish criteria with respect to nursing theory for the continuing education programs. Such criteria would obligate those programs to share in the diffusion of nursing theory to those nurses whose formal nursing education did not include nursing theory.

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Appendix A

Approved Continuing Education Providers

Table A-1
 Responses from Initial Mailing to State Nurses Associations
 or State Boards of Nursing in 48 Continental United States
 and the District of Columbia

State	Total Number of Agencies	Not Available	Other	Not an Approver in 1987
Arkansas				X
California		X		
Colorado	103			
Connecticut	16			
D.C.	2			
Florida	111			
Georgia	25			
Iowa	19			
Kansas	95			
Kentucky	144			
Massachusetts		X		
Michigan	24			
Minnesota		X	(Avail. only for 3rd dist)	
Mississippi	6			
Missouri	68			
Montana		X		
Nebraska	9			
New Hampshire	6			
New Jersey				X
New Mexico		X	(Purchase \$100)	
New York	60			
North Carolina	25			
Ohio	70	Partial list	other not member	
Oklahoma		X		
Oregon	61			
Pennsylvania	15			
South Carolina	15			
South Dakota		X		
Tennessee	1			
Texas		X		
Virginia	8			
Vermont	6			
Wisconsin		X		
Wyoming	18			
Total	34	907	9	2

Table A-2
Regional Distribution of ANA and State Approved Providers
for Colleges/Universities and Hospitals According to Nursing
Practice Act Requiring Nursing Theory or Nursing Diagnosis

SHOULD BE DOING THEORY			NOT MANDATED TO DO THEORY		
State	Schools	Hospitals	State	Schools	Hospitals
<u>Region I - Eastern</u>					
Connecticut	1	15	Delaware ^b		
Florida	2	14	Dist. of Col.	2	
Maryland ^{a,b}	3		Georgia	3	15
New Jersey	1		Maine ^b		
New York	10	32	Mass ^{a,c}	1	
Ohio	10	50	New Hamp.	2	4
Pennsylvania	7	12	N. Carolina	1	16
Rhode Island ^b			S. Carolina	2	4
Vermont	0	5	Virginia	3	3
			West Virginia	2	
<u>Region II - Central</u>					
Alabama ^b			Arkansas ^c		
Indiana ^a	4		Illinois ^a	5	0
Iowa	1	3	Kentucky	26	68
Kansas	18	46	Louisiana ^a	3	
Mississippi	1	6	Michigan	4	20
Missouri	3	47	Minnesota ^a	1	
Nebraska	2	7	Oklahoma ^{a,c}	1	
N. Dakota ^b			Tennessee	3	
S. Dakota ^{a,c}	1		Wisconsin ^{a,c}	4	
<u>Region III- Western</u>					
Colorado	2	30	Arizona ^{a,b}	1	
Montana ^c			California ^{a,c}	1	
Oregon	4	18	Idaho ^b		
Utah ^b			Nevada ^b		
Washington	4		New Mexico ^c		
Wyoming	2	16	Texas ^{a,c}	3	

Table A-2 (continued)

Region	Number of Schools	Number of Hospitals
I - Eastern	46	174
II - Central	77	197
III - Western	17	64
Totals	140	435

Note. Total providers = 575.

^aNumber of schools obtained from ANA.

^bNumber of states which have not responded.

^cNumber of states which cannot provide information.

All Schools and hospitals are listed in their respective directory: American Hospital Association. (1986). American hospital association guide to the health care field. Chicago: Author. College Blue Book (20th ed.). (1985). New York: Macmillan.

Appendix B
Initial Sampling Frame Cover Letter

Emerging social changes require nursing to become full partners in the delivery of health care. Toward this end nursing theory is advocated for nursing to define its independent realm of practice. Continuing education has a significant role in educating nurses about nursing theory as well as its implementation into practice. The extent that continuing education addresses nursing theory is the focus of my proposed dissertation for Virginia Polytechnic Institute and State University.

Would you please provide me with a listing of names and addresses of agencies which have been approved as providers of continuing education during the 1986 calendar year. A stamp self-address envelope is included for your convenience. The listing will establish a sampling frame for a survey of selected continuing education providers. Data from providers will be aggregated for analysis and confidentially will be maintained.

Results of the study will be available upon request.

Thank you for your cooperation.

Sincerely,

Hazel B. Marshall, R.N., M.N.

Appendix C

Cronbach's Alpha for Multi-item Scales

Table C-1
Cronbach's Alpha for Multi-item Scales

Scale Name	Items in Scale	Reliability Coef.	Cronbach's Alpha
<u>Function</u>	5		.8588
Nursing Process		.8262	
Patient/Family Teaching		.8259	
Nursing Decisions		.8430	
Institutional Tasks		.8206	
Follow MD Orders		.8309	
<u>Practice</u>	10		.9220
Clarify Roles		.9126	
Area Sole Responsibility		.9121	
Focus of Nursing		.9115	
Goal of Nursing		.9138	
Data Base		.9126	
Expand Skills		.9219	
Explain Nursing		.9157	
Interventions		.9156	
Patient/Family Roles		.9144	
Nursing Diagnosis		.9110	
<u>Characteristics</u>	9		.8154
Ease Understand		.8018	
Orientation to Practice		.7950	
Compatibility Own Beliefs		.7917	
Explain Nursing		.7948	
Orientation to Man		.7982	
Orientation to Health		.7951	
Compatibility with Philosophy		.7841	
Ease Application		.7895	
Compatibility with Med. Model		.8207	
<u>Roles</u>	6		.8353
Advocate		.8270	
Facilitate		.8147	
Design Specialist		.7969	
Change Agent		.8153	
Consultant		.7903	
Content Specialist		.8044	

Table C-1 continued

Scale Name	Items in Scale	Reliability Coef.	Cronbach's Alpha
<u>Profession</u>	6		.8911
Autonomy		.8722	
Independence		.8661	
Generate Knowledge		.8833	
Control of Practice		.8620	
Accountability		.8818	
Social Worth		.8677	
<u>Demand</u>	7		.7544
Nursing Community		.7617	
ANA		.7100	
Nurse Practice Act		.6961	
Mission of CE		.7334	
Nurse Education		.7499	
Requirements for Practice		.7195	
Employer's Mission		.6930	
<u>Patterns</u>	5		.5953
Total Program/Spec. Theory		.5938	
Total Program/Multiple Theory		.4797	
NT for Intervention		.5684	
Major Object. Clinical Course		.5454	
Total Program/Apply to Practice		.5063	
<u>Knowledge</u>	7		.9100
Orem, Dorothea: Self-Care Deficit Theory		.8620	
Roy, Sister Callista: Adaptation		.8681	
King, Imogene: Goal Attainment		.8633	
Rogers, Martha: Unitary Man		.8860	
Johnson, Dorothy: Behavioral System		.8802	
Parse, Rosemarie: Man-Living-Health		.8821	
Peplau, Hildegard: Interpersonal Relations		.8758	

Appendix D
Survey Instrument with Cover Letter



VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

COLLEGE OF EDUCATION — NORTHERN VIRGINIA GRADUATE CENTER

Dear Colleague:

Continuing education is a significant contributor in the transfer of information required for nursing. As nursing advances towards professionalism, nursing depends upon continuing education to diffuse information. Your views are important in defining continuing education's achievement in disseminating such information.

As a nurse educator, I am interested in nursing theory as an orientation to nursing practice and to the nursing profession. This survey is being conducted to assess the extent that continuing education addresses nursing theory. Your perceptions about nursing theory and your own programming practices will assist me in describing continuing education's present status in the spread of knowledge about nursing theory. For this reason, I am requesting that you complete the enclosed questionnaire. The questionnaire should require no more than 15 minutes of your time.

Your name was selected from the names of approved providers obtained from the American Nurses' Association, state nurses' association or from the state board of nursing. Findings and conclusions will be drawn from the aggregated data and responses will be held in strict confidence. The questionnaires are coded for my use so that I can contact those who do not respond.

A stamped, self-addressed envelope is enclosed for your convenience. Please return your response by June 15, 1988.

Results will be available upon request. Thank you for your assistance.

Sincerely,

Hazel B. Marshall, R.N., M.N.
Doctoral Candidate
Virginia Tech

Harold W. Stubblefield
Associate Professor
Adult Education

PERCEPTIONS AND PRACTICES OF CONTINUING EDUCATION
PROVIDERS REGARDING NURSING THEORY

Code: I _____
II _____

General Instructions

1. Answer all questions to the best of your knowledge by circling the appropriate response(s).
2. Use the pre-addressed postage-paid envelope for returning your responses by June 15, 1988 to:

Hazel B. Marshall
VA Drive

Part I: Beliefs About Nursing Theory

First, some questions about your beliefs related to nursing theory.

1. Rate your opinion of the importance of nursing theory in the performance of each of the following nursing functions.

	<u>Essential</u>			<u>Not Important</u>	
1. IMPLEMENTING THE NURSING PROCESS	5	4	3	2	1
2. PATIENT/FAMILY TEACHING	5	4	3	2	1
3. MAKING DECISIONS ABOUT NURSING	5	4	3	2	1
4. PERFORMING INSTITUTIONALIZED TASKS	5	4	3	2	1
5. FOLLOWING MEDICAL ORDERS	5	4	3	2	1

2. Rate the importance of nursing theory to each of the following elements of nursing practice.

	<u>Essential</u>			<u>Not Important</u>	
1. CLARIFYING THE ROLE(S) OF NURSING	5	4	3	2	1
2. LEGITIMIZING AREA OF SOLE RESPONSIBILITY	5	4	3	2	1
3. DEFINING FOCUS OF NURSING	5	4	3	2	1
4. CLARIFYING GOAL OF NURSING	5	4	3	2	1
5. STIPULATING DATA BASE FOR NURSING	5	4	3	2	1
6. EXPANDING THE TECHNICAL SKILL (TASK) OF NURSING	5	4	3	2	1
7. EXPLAINING NURSING TO OTHERS	5	4	3	2	1
8. DETERMINE SPECIFIC NURSING INTERVENTIONS	5	4	3	2	1
9. DEFINE PATIENT/FAMILY ROLE IN MANAGEMENT OF CARE	5	4	3	2	1
10. IDENTIFY PROBLEM AREAS OR NURSING DIAGNOSIS	5	4	3	2	1

3. Rate the importance of the following characteristics of nursing theory in establishing nursing as a profession.

	<u>Essential</u>			<u>Not Important</u>	
1. AUTONOMY	5	4	3	2	1
2. INDEPENDENCE	5	4	3	2	1
3. HELPS GENERATE SPECIALIZED KNOWLEDGE	5	4	3	2	1
4. HAS CONTROL OVER ITS OWN PRACTICE	5	4	3	2	1
5. ACCOUNTABILITY TO THE PUBLIC	5	4	3	2	1
6. DEFINE NURSING SOCIAL WORTH (SIGNIFICANCE)	5	4	3	2	1

Part II: Program Offerings

Please respond to these questions on Continuing Education (CE) programs that you offered during the 1987 calendar year.

4. The total number of CE programs for nursing offered at your institution during the 1987 calendar year was (_____).
5. Of those programs, nursing theory was a part of (_____) program offerings. (Write in the number)

IF NURSING THEORY IS INCLUDED IN YOUR CE OFFERINGS, PLEASE CONTINUE.
IF NO NURSING THEORY, PLEASE PROCEED TO QUESTION 12.

6. For your program(s) during the 1987 calendar year, rate the importance of the factors listed below on your decisions to include nursing theory.

	<u>Essential</u>			<u>Not Important</u>	
1. INTEREST FROM NURSING COMMUNITY	5	4	3	2	1
2. ANA STANDARDS	5	4	3	2	1
3. STATUTORY CHANGE IN NURSE PRACTICE ACT	5	4	3	2	1
4. MISSION STATEMENT OF CONTINUING EDUCATION OF AGENCY	5	4	3	2	1
5. INTEREST FROM NURSE EDUCATORS	5	4	3	2	1
6. PERCEIVED CHANGES IN THE REQUIREMENTS OF PRACTICE	5	4	3	2	1
7. MISSION STATEMENT OF EMPLOYING AGENCY	5	4	3	2	1

7. To what extent did the following characteristics of a theory influence your decision to offer a program that included nursing theory?

	<u>Always</u>			<u>Never</u>	
1. EASE OF UNDERSTANDING	5	4	3	2	1
2. ORIENTATION TO EXISTING NURSING PRACTICE	5	4	3	2	1
3. COMPATIBILITY WITH OWN BELIEFS ABOUT NURSING	5	4	3	2	1
4. COMPATIBILITY WITH MEDICAL MODEL	5	4	3	2	1
5. EXPLAINS THE PHENOMENON OF NURSING	5	4	3	2	1
6. ORIENTATION TO MAN	5	4	3	2	1
7. ORIENTATION TO HEALTH	5	4	3	2	1
8. COMPATIBILITY WITH INSTITUTION'S PHILOSOPHY	5	4	3	2	1
9. EASE OF APPLICATION TO PRACTICE	5	4	3	2	1

8. There are many ways that providers may offer nursing theory. How often was each of the following methods used in your program(s)?

	<u>Always</u>			<u>Never</u>	
1. TOTAL PROGRAM FOR CONTENT OF A SPECIFIC NURSING THEORY	5	4	3	2	1
2. TOTAL PROGRAM TO PRESENT CONTENT OF MULTIPLE NURSING THEORIES	5	4	3	2	1
3. SPECIFIC NURSING THEORY FOR A PARTICULAR NURSING INTERVENTION	5	4	3	2	1
4. AS A COMPONENT OF CE PROGRAM: MAJOR OBJECTIVE FOR EACH CLINICAL COURSE FOR APPLICATION OF THEORY	5	4	3	2	1
5. TOTAL CE PROGRAM TO APPLY NURSING THEORY TO PRACTICE	5	4	3	2	1

9. Please rate how competent you feel to perform each of the following roles even if you have not performed them.

	<u>Expert</u>			<u>Could Not Do</u>	
1. ADVOCATE FOR NURSING THEORY WITHIN NURSING	5	4	3	2	1
2. FACILITATOR DURING COURSE OFFERING THAT INCLUDED NURSING THEORY	5	4	3	2	1
3. DESIGN SPECIALIST FOR COURSE THAT PERTAINS TO NURSING THEORY	5	4	3	2	1
4. CHANGE AGENT FOR AN INSTITUTION TO IMPLEMENT A PARTICULAR NURSING THEORY	5	4	3	2	1
5. CONSULTANT TO AGENCY TO DETERMINE REQUIREMENTS FOR NURSING THEORY	5	4	3	2	1
6. CONTENT SPECIALIST FOR A SPECIFIC NURSING THEORY	5	4	3	2	1

10. Of the following statements, which one describes the practice situation for your institution. Offering courses in nursing theory was:

1. A NEW GOAL AND A FIRST TIME OFFERING
2. A CONTINUATION OF PREVIOUSLY ESTABLISHED GOALS AND REPEATED OFFERINGS OF AN ESTABLISHED PROGRAM
3. A REVIVAL OF AN ESTABLISHED GOAL BUT THE FIRST TIME OFFERING
4. A CONTINUATION OF PREVIOUSLY ESTABLISHED GOALS BUT ANOTHER FOCUS, e.g., REFINING THE NURSING THEORY
5. NOT AN ESTABLISHED GOAL

11. Please rank order the functional categories of persons who attended courses that included nursing theory. (one (1) being the largest group and five (5) being the smallest group).

- _____ 1. NURSE MANAGER
 _____ 2. NURSE EDUCATOR
 _____ 3. STAFF NURSE
 _____ 4. CLINICAL NURSE SPECIALISTS
 _____ 5. OTHER (Please specify: _____)

12. Who approves your program offerings?

1. STATE NURSES' ASSOCIATION
 2. ANA
 3. STATE BOARD OF NURSING

Part III: Information about Nursing Theory

13. Please rate your own level of knowledge about each of the theories or models listed below.

	<u>Extremely Knowledgeable</u>			<u>No Knowledge</u>	
1. Orem, Dorothea: SELF-CARE DEFICIT THEORY	5	4	3	2	1
2. Roy, Sister Callista: ADAPTATION THEORY	5	4	3	2	1
3. King, Imogene: GOAL ATTAINMENT THEORY	5	4	3	2	1
4. Rogers, Martha: UNITARY MAN THEORY	5	4	3	2	1
5. Johnson, Dorothy: BEHAVIORAL SYSTEM THEORY	5	4	3	2	1
6. Parse, Rosemarie: MAN-LIVING-HEALTH THEORY	5	4	3	2	1
7. Peplau, Hildegard: INTERPERSONAL RELATIONS THEORY	5	4	3	2	1
8. OTHER _____	5	4	3	2	1
(Please Specify)					

14. The theorist of which you are most knowledgeable is
 (_____)
 Write in name of theorist
15. Listed below are summary statements from nursing theories that best describe the essence of nursing. For the nursing theory for which you are most knowledgeable, identify the essence of nursing.
1. MEDICALLY DERIVED HEALTH NEEDS
 2. BEHAVIORAL RESPONSES OF CLIENT TO ILLNESS
 3. FACILITATION OF THERAPEUTIC COMMUNICATIONS FOR PROBLEM RESOLUTION
 4. MANIPULATION OF THE ENVIRONMENT TO FACILITATE THE PERSON'S ADAPTA-
TION TO ILLNESS
 5. INTERACTIONS BETWEEN NURSE AND CLIENT FOR MUTUAL GOAL SETTING AND
METHODS OF GOAL ATTAINMENT
 6. IDENTIFICATION OF PATTERNS WITHIN PERSON AND HIS ENVIRONMENT AND
THE SUBSEQUENT REPATTERNING TO ACHIEVE A HIGHER LEVEL OF EXISTENCE
 7. GUIDING AND CLARIFYING PERCEPTIONS ABOUT HEALTH AND MOBILIZING
FAMILY INTERRELATIONS TO CO-CREATE NEW PATTERNS OF RELATING
 8. ASSISTING INDIVIDUALS WHO ARE UNABLE TO PERFORM THE REQUIRED REGU-
LATORY BEHAVIORS
 9. OTHER (Please specify: _____)

Part IV: General Information

Now, some questions about yourself and your background.

16. Circle any of the following programs that included nursing theory in your formal education.
1. DIPLOMA
 2. ASSOCIATE DEGREE
 3. BACCALAUREATE
 4. GRADUATE (MASTERS)
 5. DOCTORATE
 6. NO RESPONSE
17. Nursing theory content in your formal education was offered as:
1. A SINGLE COURSE
 2. MORE THAN ONE COURSE
 3. PART OF SEVERAL COURSES
18. The nursing theory content addressed:
1. A SINGLE THEORY
 2. MULTIPLE THEORIES

19. Your own knowledge about nursing theory has been gained from:
1. FORMAL (DIPLOMA/DEGREE) EDUCATION
 2. CONTINUING EDUCATION
 3. SELF-STUDY
 4. TALKING WITH PEERS
 5. A COMBINATION OF ABOVE SOURCES
 6. OTHER (Please specify: _____)
 7. NO KNOWLEDGE OF NURSING THEORY
20. What is the highest level of formal education that you have attained?
1. DIPLOMA IN NURSING
 2. ASSOCIATE DEGREE IN NURSING
 3. BACHELORS IN NURSING
 4. BACHELORS IN NON-NURSING
 5. MASTERS IN NURSING.
 6. MASTERS IN NON-NURSING
 7. DOCTORATE IN NURSING
 8. DOCTORATE IN NON-NURSING
21. You are presently employed by...
1. HOSPITAL
 2. COLLEGE OR UNIVERSITY
 3. OTHER (Plese specify: _____)
22. Including all previous positions what is the total number of years that you have practiced as a registered professional nurse?
- _____
- Years
23. How long have you been in your present position? _____
- Years
24. And lastly, if you have not included nursing theory in any program offering during the 1987 calendar year, would you list the most significant reason(s) for the exclusion.

Thank you for your time and assistance.

Appendix E
Second Cover Letter



VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

COLLEGE OF EDUCATION — NORTHERN VIRGINIA GRADUATE CENTER

June 23, 1988

Dear Colleague:

About three weeks ago I wrote to you seeking information about your views and program practices relative to nursing theory as an orientation to nursing and to the nursing profession. As of today your completed questionnaire has not been received.

The number of questionnaires returned is encouraging. Your information is needed because it will add to the overall usefulness in describing the present status of continuing education providers in disseminating information in a specific area.

This study is important because of the belief that continuing education providers perform a significant role in keeping the nursing community apprised of new information from multiple sources. The results are important to nursing education, nursing practice, and to the nursing profession. The usefulness of the results depends upon how accurately the beliefs and practices of continuing education providers are described.

For your convenience another questionnaire and stamped self-addressed envelope is included.

Your contribution to the success of this study will be greatly appreciated.

Sincerely,

Hazel B. Marshall, R.N., M.N.
Doctoral Candidate
Virginia Tech

Harold W. Stubblefield
Associate Professor
Adult Education

Appendix F

Comparisons of Early and Late Responders

Table F-1

t Test Analysis of Means for Multi-Item Scales and Selected Demographics Between Early and Late Responders

Variable	t value	df	Level of Significance
Beliefs			
Nursing Function	-1.33	184	.184
Nursing Practice	-0.42	184	.678
Nursing as Profession	-1.88	179	.062
Implementation Issues			
Demand for Theory Characteristics of Theory	-0.94	87	.351
Patterns of Offerings	-0.41	85	.686
Roles	-0.54	83	.589
	0.56	87	.574
Level of Knowledge	2.43	181	.016*
Program Offerings			
Total CE Programs	0.07	68	.942
Theory Programs	-0.17	74	.863
Experience			
Years Prof. Nurse	-0.20	180	.839
Years Present Pos.	-0.37	181	.741

Note. Where $p < .05$ for F-test separate sample t test used. Where $p > .05$ for F-test pooled t-test used.

* $p < .05$.

Table F-2
Chi-Square Analysis of Responses Between Early and Late
Responders

Variable	Early Rspndrs %	Time of Response		Cramer's v	df	Level of Signif.
		Late Rspndrs %	Chi Square			
Goals	64	37	1.38	.127	4	.848
Clientele						
Nurse Mgr	64	36	10.730	.363	4	.030*
Nurse Educ	68	33	2.443	.177	4	.654
Staff Nurse	65	35	7.845	.313	4	.097
Chem Nurse						
Specialist	68	33	10.270	.394	4	.036*
Other	66	34	4.753	.405	4	.313
Prgm Approver	70	30	2.734	.126	2	.255
Theorist Most						
Knowledgeable	73	27	9.908	.249	2	.129
Essence of						
Nursing	72	28	5.286	.194	8	.727
Nursing Theory in						
Formal Education						
Diploma	69	31	.331	.043	1	.565
Assoc Degree	69	31	.079	.062	1	.779
Baccalaur.	69	31	.256	.038	1	.613
Graduate	69	31	8.125	.214	1	.004*
Doctorate	69	31	.005	.005	1	.943
No Response	69	31	2.051	.107	1	.152
Theory Courses	70	30	5.016	.172	4	.286
Number of						
Theories	70	30	.488	.054	2	.783
Formal/Informal						
Sources	69	31	8.030	.212	7	.330
Education	69	32	.001	.001	1	.994
Employing Agcy	69	32	2.298	.113	1	.130

Note. All percentages are rounded to nearest whole percent.

*p < .05

Appendix G

Respondents Perceived Level of Knowledge for Selected Nursing Theories

Table G-1

Distribution of CE Providers' Perceived Level of Knowledge with Respect to Selected Nursing Theories

Theory	<u>Percentage</u>					Number Responses
	Extremely Knowledgeable	4	3	No Knowledge	2	
Orem, Dorothea: Self-Care Deficit Theory	12	42	26	11	9	180
Roy, Sister Callista: Adaptation	13	37	32	8	10	182
King, Imogene: Goal Attainment	7	17	32	23	20	181
Rogers, Martha: Unitary Man	9	24	37	17	12	180
Johnson, Dorothy: Behavioral System	5	18	34	21	22	178
Parse, Rosemarie: Man-Living-Health	3	4	17	20	55	180
Peplau, Hildegard: Interpersonal Relations	12	24	26	20	17	179
Other	9	37	26	19	9	43

Note. All percentages are rounded to nearest whole percent.

Appendix H

Other Persons for Which Respondents Knowledgeable

Table H-1

Distribution of Other Nurse-Theorists Identified by CEP
Respondents for Which the Respondents are Knowledgeable

<u>Theorist</u>	<u>Number</u>
Neuman, Betty	15
Newman, Margaret	7
Nightingale, Florence	4 ^a
Levine, Myra	4
Watson, Jean	4
Henderson, Virginia	3
Leininger, Madeline	2
Travelbee, Joyce	1
Fitzgerald (No other name given)	1
Schlotfeldt, Rozella	1
Knowles, Malcomb	1 ^b
Total	43

Note. ^aEnglish nurse credited as being first nursing theorist.

^bNonnurse - Adult Educator

Appendix I

One-Way ANOVA of Multi-Item Scales with Respect to
Source of Knowledge, Education, and
Employing Agency

Table I-1

One-Way Analysis of Variance of Beliefs, Practice, Level of Knowledge of CE Providers with Respect to Formal Theory, Number of Courses, Number of Theories, Education, and Employing Agency

Variable	<u>Source of Knowledge</u>				
	Formal Theory	Number Courses	Number Theories	Education	Employ Agcy
<u>Beliefs</u>					
Function	.1599	.0608	.2448	.2619	.2477
Practice	.1230	.0026*	.0130*	.0990	.9542
Profession	.1470	.2534	.1604	.6677	.5699
<u>Practice</u>					
Demand	.2284	.6187	.2504	.3879	.1133
Characterist.	.0068*	.7846	.0764	.4972	.3845
Patterns	.4029	.8602	.8651	.6192	.1948
Roles	.4688	.8881	.4605	.4255	.5174
<u>Knowledge</u>					
Level of Knowledge	.0222*	.8478	.1580	.5641	.0000*

*p < 0.05

Appendix J

Reasons Listed by Respondents for Excluding
Nursing Theory from CE Programs

Table J-1

**Distribution of Reasons Listed by CEP Respondents for
Excluding Nursing Theory from CE Programs**

<u>Reasons</u>	<u>Number^b</u>	<u>Percentage</u>
Requirements for Clinical/Tech Skills	20	14
Lack of Interest from Nurses	16	12
Lack of Resources	16	12
No Priority Nurse Management	15	11
Level of Education (CEP & Nurses in Workplace)	12	9
Needs Assessment for CE	11	8
Not Valued as Requirement	10	7
Other Priorities	4	3
Programs Not Appropriate	4	3
Available Other Settings	2	1
Future Plans to Offer Programs	6	4
No Response ^a	23	16
Total	139	100

Note. All percentages rounded to nearest whole percent.

^aDid not offer theory; should have answered.

^bSome respondents cited more than one reason.

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