# TAXONOMY OF ETIOLOGY-SPECIFIC INDEPENDENT NURSING INTERVENTIONS: INSTRUMENT DEVELOPMENT

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We hereby recommend that the thesis prepared under our supervision by Nancy C. Akins Johnson entitled Taxonomy of Etiology-Specific Nursing Interventions: Instrument Development

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# TAXONOMY OF ETIOLOGY-SPECIFIC INDEPENDENT NURSING INTERVENTIONS: INSTRUMENT DEVELOPMENT

## ABSTRACT

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The problem of the study was to develop a taxonomy of etiology-specific independent nursing interventions related to direct patient care which was exhaustive and mutually exclusive. An exploratory, descriptive, methodological research design was utilized. Research objectives rather than hypotheses were used. Research instruments summarized data collected from nursing literature to (a) define independent and interdependent nursing interventions, (b) infer the nurse's role and source of client difficulty from nursing models, and (c) classify nursing interventions in nursing process literature as independent or interdependent.

The developed taxonomy is a four-dimensional, six-category, two-column table. The four dimensions are environmental, psychologic, social, and physiologic. Independent nursing interventions and corresponding etiologies in each category are described and related to the nurse's role and source of client difficulty.

Interventions, including managing the client's environment, teaching, and "hands-on" interventions, were among the most clearly described in the taxonomy and were most frequently cited.

Dedicated

to

my husband, Paul,

for his love, encouragement, patience, and support.

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# CHAPTER I

## INTRODUCTION

Nursing has undergone a dramatic metamorphosis since Florence Nightingale first began recording the activities and effects of nursing care during the Crimean War. Nursing diagnoses, as well as theoretical frameworks and empirical research, have become characteristic of the development of nursing science. The relationship or link between theoretical developments in nursing and nursing practice issues and advances has not yet been clearly established. Seemingly, the theoretical developments in nursing have been occurring separately from practice developments. The domain of nursing must be defined in order to establish nursing as an autonomous profession and the association of theoretical developments and clinical practice needs to be determined.

Nursing diagnosis is regarded as providing the potential for more clearly delineating the domain of nursing and establishing nursing as a scientific profession. The National Conference Group for Classification of Nursing Diagnosis (NCG) was established in 1973 to coordinate the national effort of developing a diagnostic classification system. The classification of

nursing diagnosis to date includes approximately 50 diagnoses. It was hoped that a diagnostic classification would help to more clearly describe the domain of nursing. The present classification of nursing diagnoses falls short of this goal.

Gartland (1982) developed an instrument for the purpose of categorizing groups of analogous etiologies and interventions from nursing care plans. The Schema for Classification (Gartland, 1982) provided a basis for determining whether nursing interventions were specific or congruent with etiologies in nursing diagnoses. The instrument is significant in that it presented the first method to establish congruency between nursing interventions and the etiology component of the nursing diagnosis. Further development of this instrument is necessary because the categories of etiologies and nursing interventions contained in the instrument were not mutually exclusive or exhaustive. Gartland's instrument provided direction for determining the congruency of interventions with certain etiologies and also provided a general description of nursing by describing nursing interventions for particular etiologies. Gartland's Schema for Classification and the efforts of the NCG led the present investigator to consider the ramifications of

constructing a classification or taxonomy of etiology-specific nursing interventions.

## Statement of the Problem

The problem of this study was to develop a taxonomy of etiology-specific independent nursing interventions related to direct patient care and which is exhaustive and mutually exclusive.

## Justification of Problem

Various attempts have been made to define nursing and develop nursing theories which delineate nursing's distinctive role in health care. A taxonomy of nursing diagnoses was viewed by Gebbie and Lavin (1974) as a systematic description of the nursing domain. This type of approach appears to have benefit for providing a clearer conceptualization of the practice of nursing.

Dickoff, James, and Wiedenbach (1968) contended that there are four levels of theory: factor-isolating, factor-relating, situation-relating, and situation-producing. Factor-isolating theory, or first level theory, is considered the basis from which higher level theory is derived. Classifying is considered first level theory, and nursing may achieve a clearer perspective of the profession by utilizing first level theory development in order to better describe its practice. A taxonomy of

etiology-specific nursing interventions would better enable the nursing profession to describe the domain of nursing.

Nurses have traditionally performed a gamut of activities including non-nursing tasks, as well as direct and indirect patient care. A clearer understanding of nursing would be facilitated by focusing on the independent aspects of nursing practice and the development of a taxonomy of independent nursing interventions. Clarification of what constitutes independent nursing interventions is revealed in nursing diagnosis literature. Soares (1978) distinguished nursing diagnoses from medical diagnoses in that the implied treatment must lie within the domain of nursing and the ability of the nurse to independently perform the treatment. The aspects of nursing practice which involve performing interventions ordered by physicians or performed in lieu of standing protocols does not constitute independent nursing practice. Therefore, nursing interventions which are independently initiated and conducted by the nurse would reflect a clearer description of the independent functions of nursing; these interventions are key in describing the practice of nursing.

Carpenito (1983) suggested that a taxonomy which identifies the independent domain of nursing would provide nurses with a common frame of reference. Such a taxonomy would have implications for nursing practice as well as nursing education and research. The taxonomy would provide a method for nurses to communicate what they do, not only among members of the profession, but to other health care professionals and the public. A better understanding of the use of nursing diagnoses would be gained further by delineating nursing diagnosis from medical diagnosis. Furthermore, a taxonomy of independent nursing interventions and corresponding etiologies would promote the autonomy of nursing and further establish nursing as a scientific profession.

The taxonomy has implications for nursing education and research. Educators and students would be able to differentiate independent nursing practice from other aspects of nursing and identify human responses which nurses are capable of treating. Sokal (1974) noted that the principle scientific purpose for developing classifications is that relationships among phenomena can be portrayed and lead to formulations and testing of hypotheses. The taxonomy of etiology-specific independent nursing interventions related to direct patient care would

provide a framework for nursing research, as relationships among concepts would require testing and validation.

Henderson (1966) contended that an occupation which provides service affecting human life must outline its functions, especially if it is to be considered a profession. There appears to be a long time-felt need to support the development of a taxonomy of independent nursing interventions.

A taxonomy of independent nursing interventions must include the corresponding etiology component of the nursing diagnosis statements for which the interventions are conducted. The etiology component of the nursing diagnosis statement provides direction to the nurse for appropriate interventions which should be initiated and indicates the reason why the intervention is conducted. If etiologies are not included in the taxonomy, the taxonomy would be neither meaningful nor useful.

Gartland (1982) developed the Schema for Classification (Appendix A), the first instrument for the categorization of etiologies and interventions. This tool provided a method to establish the degree of congruency between nursing interventions and the etiology of the nursing diagnosis statement. However, the etiology and intervention categories did not possess several important

characteristics of a classification system. The categories were neither exhaustive nor mutually exclusive. Further development of a taxonomy of etiology-specific nursing interventions which is exhaustive and has mutually exclusive categories is necessary.

## Assumptions

The study was based on the following assumptions:

1. Nursing has unique functions comprised of independent activities specific to the practice of nursing, and interdependent activities or duties resulting from collaboration with other health care professionals.

2. Nursing activities can be classified into direct and indirect patient activities.

3. The nursing process is a systematic method of analyzing client responses and deriving appropriate nursing interventions which are guided by and specific for the etiology identified in the nursing diagnosis statement.

4. A description of nursing is, at least in part, reflected in conceptual nursing models, nursing diagnosis, and nursing process literature.

## Research Objectives

Research objectives rather than research hypotheses were used for this study, due to the descriptive

methodological design utilized. The objectives presented a method to systematically collect and analyze data in order to construct a taxonomy of etiology-specific independent nursing interventions related to direct patient care. The objectives were:

1. Summarize from eight sources of nursing diagnosis literature (a) how nursing diagnoses are differentiated from diagnoses made by other health care professionals and (b) how nursing interventions directed by nursing diagnoses are differentiated from interdependent nursing interventions directed by diagnoses made by other health care professionals.

2. Define independent and interdependent nursing interventions based on data collected in research objective 1.

3. Summarize from 12 nursing models the concepts of (a) nurse's role, (b) source of client difficulty, and (c) any independent nursing interventions and corresponding etiologies which are related to direct patient care.

4. Identify the independent nursing interventions and corresponding etiologies related to direct patient care in relevant case study data from 10 sources of nursing process literature.

5. Organize data collected for research objectives 3 and 4 into categories of nurse's role-source of client difficulty sets and subcategories of etiology-intervention sets.

6. Combine similar etiology-intervention sets and nurse's role-source of difficulty sets into exhaustive, mutually exclusive categories. Etiology-intervention sets or nurse's role-source of client difficulty sets not applicable to previously determined categories were used as the basis for a new category.

7. Match the etiology-intervention categories to corresponding categories of nurse's role-source of client difficulty categories. Separate the etiology-intervention categories into separate, corresponding categories.

## Definition of Terms

The following terms were operationally defined for this study:

1. Taxonomy of etiology specific nursing interventions--A six category, two column table. The source of client difficulty and nurse's role is defined in each category. The etiology column contains specific etiologies amenable to nursing intervention and which are related to the source of client difficulty. The nursing intervention column contains descriptions and examples of

nursing activity required to treat the corresponding etiology and which are considered independent, according to the definition derived in research objective 2. The nursing interventions are related to the nurse's role for each category.

2. Exhaustive categories--the degree that sets or groups possess the potential to allow all identified independent nursing interventions and corresponding etiologies to be placed or coded in the taxonomy of etiology-specific nursing interventions as determined by the investigator's judgment.

3. Mutually exclusive categories--the degree that sets or groups possess the potential to allow all identified independent nursing interventions with corresponding etiologies to be coded or placed in one, and only one group or another, as determined by the investigator's judgment.

4. Etiology--the actual or potential source of a client's difficulty for which nursing care is necessary as identified by a nursing theorist.

5. Interventions--the actual nursing activities identified by nursing theorists which are necessary to change, prevent, or alleviate the etiology.

6. Direct patient care--activities which require direct personal contact between the patient and the nurse. Activities in which the nurse does not have direct contact with the patient, such as supervising, referring, and consultations are considered indirect patient care and will be excluded as direct patient care activities.

7. Nursing process literature--nursing literature possessing a title which indicates that the content pertains to the systematic process utilized by nurses to identify and intervene in health problems of clients. Nursing process literature may also be utilized as nursing diagnosis literature (Carnevali, 1983; Gordon, 1982). Nursing process literature for this study included: Aspinall and Tanner (1981), Bower (1982), Carnevali (1983), Carpenito (1983), Gordon (1982), Griffith and Christensen (1982), LaMonica (1979), Leonard and Redland (1981), Mayers (1983), and Yura and Walsh (1982).

8. Nursing diagnosis literature--nursing literature with a title that indicates the majority of content pertains to nursing diagnoses, a systematic process of identifying and formulating nursing diagnosis. Certain nursing diagnosis literature may also be utilized as nursing process literature (Carnevali, 1983; Gordon, 1982). Nursing diagnosis literature for this study

included Aspinall (1976), Carlson, Craft, and McGuire (1982), Carnevali (1983), Gordon (1982), Kim and Moritz (1982), Lengel (1982), Mundinger and Jauron (1975), and Soares (1978).

9. Nursing models--conceptual representations of the practice of nursing. Nursing models for this investigation were Henderson (1966), Johnson (1980), King (1981), Levine (1967), Neuman (1982), Nightingale (1859/1980), Orem (1980), Orlando (1961), Peplau (1952), Riehl (1980), Rogers (1970), and Roy (1976).

10. Differentiation of nursing diagnoses from other health care professionals' diagnoses--the difference between nursing diagnoses and diagnoses made by other health care professionals, as reflected by nursing diagnosis literature and recorded in Instrument 1.

11. Differentiation of nursing interventions directed by nursing diagnosis from nursing interventions directed by diagnosis of other health care professionals--how nursing interventions directed by nursing diagnoses are distinguished from nursing interventions which are directed by diagnoses made by other health care professionals, as reflected by nursing diagnosis literature and recorded in Instrument 2.

12. Nurse's role--the investigator's determination of the actual role of the nurse identified by nursing model theorists and recorded in Table 3.

13. Source of client difficulty--the investigator's determination of the client's source or cause of deviations from the desired state identified by nursing model theorists and recorded in Instrument 3.

14. Nurse's role-source of client difficulty sets--paired nurse's role and corresponding source of difficulty concepts identified by the nursing model theorist.

15. Etiology-intervention sets--paired etiologies and corresponding nursing interventions derived from nursing process literature, or as identified by nursing model theorists.

16. Independent nursing interventions and corresponding etiologies--interventions performed by the nurse to modify, prevent, or alleviate specific client etiologies which are cited in nursing models and nursing process literature and recorded in Instrument 4 and Instrument 5, respectively.

17. Categorization of nurse's role-source of client difficulty sets and etiology-intervention sets related to direct patient care--the organization of nurse's role-source of client difficulty sets related to direct patient

care and etiology-intervention sets related to direct patient care into corresponding categories and subcategories and recorded in Instrument 6.

## Limitations

The limitations of this study were:

1. The taxonomy resulted from the investigator's interpretation of data collected from nursing literature.

2. Nonprobability selection of nursing literature and the scope of the data collection procedure may have affected the final taxonomy resulting from this study.

3. Review of nursing models, nursing diagnosis literature, and nursing process literature was selected and not all relevant nursing literature was represented.

## Summary

A taxonomy of etiology-specific independent nursing interventions may describe the domain of nursing more clearly and provide a link between theory and practice. The problem of this study was to construct a taxonomy of etiology-specific independent nursing interventions related to direct patient care.

# CHAPTER II

## REVIEW OF LITERATURE

The recognition and identification of the autonomous role of the professional nurse has resulted from theoretical and empirical developments. Nursing science and the autonomy of professional nursing have evolved simultaneously, yet developments in clinical practice and theoretical issues seem to occur somewhat independently. The link between theory and practice is not always evident. However, both theoretical and clinical developments have led to an ongoing search for a description or definition of the nursing role and domain in health care. The review of literature addresses metatheoretical issues in nursing theory development and discusses the implication, value, principles, and characteristics of classifications. The review of literature also presents a discussion about the development of the autonomous role of the professional nurse.

### Metatheoretical Perspectives

Newman (1983) acknowledged that the development of nursing science has not occurred in a smooth, orderly process. However, this is a typical evolutionary pattern of any science. In the 1960s and 1970s nursing appeared to

focus on metatheoretical developments regarding practice. According to Walker (1983), the terms "metatheoretical" and "theoretical" refer to different analysis levels. Metatheoretical analysis "focuses on methods and issues encountered in the theoretical level" (Walker, 1983, p. 407). The discussions concerned with the purposes and criteria for theory in nursing are metatheoretical in nature.

Dickoff et al. (1968) presented a theory of theories. Dickoff et al. (1968) defined four levels of theory and supported that nursing theory "must be a theory at the most sophisticated level - namely situation-producing theory" (p. 423). Situation-producing theory, or prescriptive theory, should "allow for the production of situations of a desired kind" (Dickoff et al., 1968, p. 421). Additionally, prescriptive theory presupposes the existence of factor-isolating, factor-relating, and situation-relating theories. In order for nursing to develop prescriptive nursing theory, situations must be defined in terms of factors or concepts, and the concept relationships as well as the relationships among situations must be revealed.

The theory of theories (Dickoff et al., 1968) provided a new perspective concerning the nature of nursing theory.

Walker (1983) presented several criticisms regarding Dickoff et al.'s (1968) metatheoretical proposal. According to Walker, the theory of theories has not led to a proliferation of identifiable practice theories. Furthermore, Dickoff et al. did not specify how to progress from one level of theory to another; Walker proposed that this "ivory-tower" approach was not useful. However, Dickoff et al. acknowledged that practice theory would be unlike any theory previously generated. It appears that recognition and production of a totally novel type of theory would be difficult. Walker noted an important contribution resulting from the work of Dickoff et al. which was "the explicit delineation of values and normative decisions in the theory and practice of nursing" (p. 409). Despite criticisms, the theory of theories approach appears to offer a logical guideline for the generation of nursing theories because the levels of theory build upon each other and progress to a higher level of complexity.

Dickoff et al. (1968) contended that factor-isolating theory is often not recognized because it is so basic. The essential function of factor-isolating or naming theory is to allow or enable communication to occur regarding factors or concepts. There is controversy concerning whether this is actually theory. Reynolds (1980) claimed that the

purpose of theory is to describe and that a sense of understanding can be provided by description. Kritek (1978) endorsed the validity of descriptive or factor-isolating theory and suggested that nursing concentrate on defining and discovering concepts to be used for describing the phenomena of nursing. Jacox (1974) specified that the first step of theory development is "a period of specifying, defining, and classifying the concepts used in describing the phenomena of the field" (p. 5). Factor-isolating theory provides terminology for a particular discipline, and this level of theory is necessary because it invents conceptual unities (Dickoff et al., 1968). Kritek (1978) supported the use of first level theory in nursing and suggested that nursing should concentrate on developing factor-isolating theories. "When our profession is still grappling with a common terminology, leaping to level four theory can be counterproductive" (Kritek, 1978, p. 35). The lack of acceptable nursing terminology is addressed by Bloch (1974) who demonstrated confusion arising from several overlapping nursing terms. Regardless of whether or not first level theory is considered significant theory development, nursing would seem to benefit from the development and use of factor-isolating theories.

## Implications and Utilization of Classifications

### First Level Theory

Classifying is often considered first level theory (Dickoff et al., 1968). Classifications have been utilized by many scientific disciplines such as biology and medicine. Sokal (1974) indicated that one of the purposes of classifying is to "describe what is known as the 'natural system'" (p. 1116). Many nursing theories present nursing as it "should be" rather than how it presently exists. Kritek (1978) claimed that nursing has yet to isolate concepts which label what nurses do. Classification would be a relevant scientific approach for nursing to utilize in order to label and define nursing practice concepts.

### Value and Purpose of Classifications

Sokal (1974) defined classification as "the ordering or arrangement of objects into groups or sets on the basis of their relationships" (p. 1116). Classification not only refers to a sorting process but also denotes the result of the process; therefore, classification results in a classification (Sokal, 1974). The term taxonomy refers to the theoretical study of classification and includes its principles, rules, and procedures (Sokal, 1974). The term "taxon" was used by Sokal (1974) to describe a "set of

objects of any rank recognized as a group in a classification system" (p. 1116). The process of sorting or assigning phenomena into these classes is referred to as "identification".

A classification or taxonomy facilitates communication within a group and allows for easier recollection and manipulation of information (McKay, 1977). Many classifications are intended to reflect natural systems or processes. Sokal (1974) stated that the paramount purpose of a classification system is "to describe the structure and relationship of the constituent objects to each other and to similar objects in such a way that general statements can be made about the classes of objects" (p. 1116). The synthesis of information occurring in a classification system can be used for problem solving. Kerlinger (1973) claimed that in any analysis the initial step is categorization. Relationships among taxa or phenomena may be presented which lead to the development and testing of hypotheses. Classifications and taxonomies are heuristic, and Sokal (1974) indicated that this is the primary scientific justification for developing classifications. The use of taxonomies and classifications provide a fundamental, yet significant method in which phenomena can be organized, as well as analyzed.

## Principles of Classification

There are rules or principles of organization for classifications. Although there are varying interpretations of these principles, Kerlinger's (1973) rules of categorization seem to be basic. According to Kerlinger, categories must be relevant to the purpose, mutually exclusive and independent, exhaustive, derived from one classification principle, and categories must be at similar levels of abstraction. Roy (1975) discussed the use of taxonomies in nursing and presented classification principles which incorporated Kerlinger's (1973) rules and included several other organizing rules. The additional principles of classification suggested by Roy (1975) upheld that categories should be useful, i.e., workable and communicable. Categories must be open, compatible with related classification systems, and capable of computerization. Using the principles of classification proposed by Roy (1975), categories must be based on an organizing principle as well as be relevant, complete, open, useful, compatible, and capable of computerization.

McKay (1977) pointed out that classifications in which specific defining features of phenomena are sufficient and necessary for group affiliation are referred to as monothetic. Monothetic classifications are those in which

the categories or groups differ by at least one attribute which is universally found in the objects of the specific taxa. However, the possibility exists that aberrant members of the category will be excluded (McKay, 1977). Classification taxa which are based on several equally weighted characteristics are found in polythetic classifications. In this type of classification, no one single characteristic will determine inclusion or exclusion of phenomena in a specific taxon. Sokal (1974), however, noted that polythetic classifications are general; they are not useful for a specific purpose but are useful for a variety of purposes. Monothetic classifications are useful in relation to specific properties or attributes used to determine taxa, but do not have general utility.

## Characteristics of Nursing Classifications

Gebbie and Lavin (1974) proposed that a standard classification for nursing would assist nurses in directly focusing on phenomena which are necessary to developing nursing's contribution to health care. Initial efforts to develop a nursing classification include identifying client problems or concerns most frequently identified by nurses and which are amenable to nursing interventions (Gebbie & Lavin, 1974). A nursing classification according to Gebbie and Lavin would essentially describe the domain of nursing.

McKay (1977) suggested four major tasks in developing taxonomy including (a) the selection of appropriate labels, (b) providing useable, accurate definitions, (c) selecting a logical basis for ordering, and (d) getting approval and acceptance for the classification from the population for which the classification was developed. McKay's (1977) conceptualization of a taxonomy for nursing differs somewhat from that of Gebbie and Lavin (1974). McKay specified that "a taxonomy for nursing should represent a classification of categories which give direction to the nursing process and/or categories which determine the nature of evidence to be used in evaluation of the results of nursing intervention" (p. 224).

McKay further pointed out that there are various options concerning the focus of a nursing classification. Examples include nursing diagnoses, nursing personnel, conceptual frameworks, types of nursing interventions, or criterion measures for nursing care. After the focus of the taxonomy has been selected, the assumptions which portray the organizing structure must be identified. The organizing structure for a nursing taxonomy should be clinically realistic and reflect "the distinctions which practitioners make regarding patient-client problems and characteristics (e.g., problem lists, care plans, and

intervention strategies)" (p. 224). Furthermore, a nursing taxonomy should be consistent with existing nursing theories, research findings, and with the value system of nursing. Also, nursing classifications should be congruent with classifications used by other health care professionals.

Abdellah (1969) believed that "nursing science is a degree of systematic, logical organization of phenomena" (p. 391). A nursing classification would further facilitate the development of nursing science. A taxonomy for nursing would reflect and depict the autonomous compoment of nursing practice and might possibly serve as a link between theory and practice.

## The Recognition, Identification, and Description of the Autonomous Role of the Professional Nurse

Nursing has yet to develop a definition or description of its practice which has gained universal recognition and acceptance. A review of theoretical developments in nursing reflects several approaches which have been utilized to identify and describe the domain of health care which is nursing. Functional descriptions of nursing were initially utilized to describe the practice. Other descriptive approaches which followed included client-

centered descriptions, theoretical conceptualizations, and methodological approaches. The various descriptions of nursing have led to the identification and development of the autonomous role of the professional nurse. Each descriptive attempt, including current developments to clarify nursing practice, is discussed.

## Functional Descriptions of Modern Nursing

Functional descriptions of nursing attempted to clarify the role of the nurse in terms of activities or functions which nurses performed. The functional descriptions of nursing described by Nightingale (1859/1980) and Lesnik (1954) are presented.

Nightingale provided the earliest conceptualization of modern nursing, and perhaps she was the first and last nurse to comprehend "what nursing is and what it is not" (Lewis, 1975, p. 89). According to Nightingale (1859/1980), nursing was concerned with the ill patient, whereas medicine concentrated on the patient's illness or pathology. Nightingale (1859/1980) noted that nursing was not limited to illness but was concerned also with health, since nursing endeavored to "put the patient in the best condition for nature to act upon him" (p. 110). Activities of the nurse as described by Nightingale mainly involved manipulating the patient's environment or factors external

to the patient to ensure beneficial use of fresh air, light, warmth, cleanliness, quiet, and diet. Nightingale's description of nursing focused on the activities or tasks performed by the nurse. Initial organizing developments in nursing were associated with establishing standardized training and education. In order to accomplish this, the functions and responsibilities of the nurse would have to be clarified. Besides providing a functional description of nursing, Nightingale also presented other concepts of nursing which have been the basis for philosophical and theoretical frameworks, such as the notion of holism and the depiction of nursing as separate from the medical practice. These ideas may have been the impetus for nursing's long search for parameters to identify nursing's independent practice.

From the time Florence Nightingale presented her concepts of nursing until World War II, there was little progress made concerning development of the autonomous role of the nurse (Yura & Walsh, 1978). Yura and Walsh (1978) referred to this period as the "era of maintenance" (p. 3).

Lesnik (1954) attempted to more clearly define nursing by classifying the activities of a nurse by using a function or task-oriented approach. Lesnik contended that regulation and control of the practice of nursing by state

nursing boards was a perplexing dilemma because of the lack of clarity concerning nursing practice. Lesnik stated "if the practice of nursing is to be controlled, nursing must be defined" (p. 1485). By utilizing case decisions of judicial review concerning nursing practice, Lesnik (1954) found that professional nursing activities could be classified into seven categories. These categories included (a) supervision; (b) observation of symptoms and reactions including the limited responsibility to diagnose without the right to prescribe treatment or medication; (c) charting information relative to the case; (d) supervision and direction of practical nurses and auxiliary staff; (e) executing nursing procedures and techniques; (f) providing health care, including direction, education, and social services of psychological significance; and (g) performing nursing or medical procedures which required the direction of a licensed physician (Lesnik, 1954). Several of these categories are vague, yet there are several significant aspects. The only dependent nursing function noted by Lesnik was the seventh category, performing procedures which required direction from a physician. The first six categories were designated as independent nursing functions. Independent nursing functions "require no prior medical order for their validity" (Lesnik, 1954, p. 1485),

whereas dependent functions would require medical orders as a prerequisite. This functional classification of nursing was among the first to characterize professional nurses as having an autonomous practice component.

Further significance of this classification can be found in the second category, in which Lesnik (1954) indicated that diagnosing was an independent function of the professional nurse. Specific direction concerning nursing diagnosis was not provided; however, the second category supported the autonomous role of the nurse. Lesnik's (1954) categorization of nursing may have provided direction for the regulation of nursing practice; however, the categories contain an element of vagueness and lack specificity. Lesnik's functional description of nursing recognized and identified independent aspects of nursing practice.

## Client-Centered Nursing Classification

The autonomous role of the professional nurse was further recognized by the description of nursing practice using a client-centered focus. Abdellah, Beland, Martin, and Matheney (1960) presented a client-centered description of nursing practice. The following section discusses Abdellah et al.'s client-centered nursing classification.

The list of 21 nursing problems (Abdellah et al., 1960) was the first classification of nursing problems and was developed for education purposes. It was anticipated that the development of a client-centered description of nursing would facilitate a nursing student's clinical experience by providing educators with a list of common nursing problems from which clinical assignments could be made (Abdellah et al., 1960). Educators could provide students the opportunity to care for patients with common nursing problems and thus build a sound base of clinical experience. Gordon (1982) concluded that this shifted the focus of nursing practice from task-oriented to patient-centered. Abdellah's et al. list of nursing problems included facilitating the maintenance of oxygen, nutrition, elimination, and promoting optimal activity and rest. Abdellah et al. also included nursing problems which were not physiological in nature, such as facilitating progress toward the achievement of personal goals, and the development of productive interpersonal relationships.

There are several significant aspects concerning the list of nursing problems. The classification presented the initial efforts to establish a typology of nursing problems and treatments. A nursing problem according to Abdellah (1957) was "a condition faced by the patient or family

which the nurse can assist him or them to meet through the performance of her professional functions" (p.4). The nursing problems actually represent therapeutic goals of nursing. This approach of depicting nursing represents a functional classification for patients.

Adbellah et al. (1960) realized that further development of this classification would be necessary. Even though the list of 21 nursing problems was more specific and comprehensive than previous descriptions of nursing, the classification raised questions concerning how to implement nursing practice in order to achieve the therapeutic goal. Abdellah (cited in Gordon, 1982) commented on this and noted that the classification depicted what the nurse was doing and "not why she is doing what she is, nor if she should be doing what she is" (p. 39).

The list of 21 nursing problems (Abdellah et al., 1960) did not adequately describe nursing and lacked specificity necessary to plan nursing care. The classification represented a list of functional goals for clients. The nurses' role and aspects of practice were not addressed in a manner to portray a clear understanding of the relationships between the client's goals and nursing practice. The list of nursing problems did emphasize

directly and indirectly that the concepts of nursing practice, the client, and the process of nursing were key to defining nursing practice.

## Nursing Model Development

Nursing models contain client-centered concepts and nursing role concepts to create an abstract description of nursing. This discussion of nursing models will be limited to several of the early models (Peplau, 1952; Orlando, 1961; Weidenbach, 1964) which were significant in identifying, supporting, and developing the autonomy of nursing practice. It is recognized however that there are many more significant nursing models which have also contributed to the unfolding of nursing science and independent aspects of practice.

Peplau (1952) employed theories of other scientific disciplines to provide nurses with a framework for analyzing nursing action by using an interpersonal theoretical framework. This interpersonal approach incorporated a focus on the client and the nurse. This model initiated a move from "intrapsychic emphasis within psychiatric nursing, and a dominant focus on physical care within general nursing to an interpersonal focus in both" (Fitzpatrick & Whall, 1983, p. 28).

According to Peplau (1952), the patient is a developing self-system. A mature person is capable of meeting his/her own needs. Illness or hospitalization may lead to the patient's inability to fulfill his/her needs independently. Therefore, according to Peplau, the nurse would supply the help necessary for the patient to have his/her needs met. The nurse assumes specific roles in order to aid the patient in the attainment of needs. Peplau classified these roles as stranger, resource, teacher, leader, surrogate, and counselor. Nursing activity involves the nurses' role and is enacted through a four-phase interpersonal process.

Peplau (1952) attempted to provide a foundation reflective of how the nurse interacts with and affects the patient. The basic elements of a nursing situation included (a) the patient's behavior, (b) the reaction of the nurse, and (c) the nurse's actions designed for specific patients. The interaction of these elements was considered the nursing process (Peplau, 1952).

Peplau provided one of the first views of nursing which reflected the unique role of the nurse; however, Peplau's model had limited use concerning the nurse's role and healthy clients, as the model focused on ill patients. Although Peplau did not explicitly specify nursing as a

distinct health profession, the autonomy of the nurse was implicitly described and was not associated with other health care professions. Peplau developed her model at a time when nursing models were not a familiar ideation of nurses. The notion of a "nursing model" supports that nursing is separate and independent of other health care professions.

Another significant attempt to describe nursing was provided by Orlando (1961) who is considered to have been influenced by Peplau (1952). According to Orlando, optimal nursing care would result from deliberate nursing and patient validation. This was one of the first models to emphasize patient participation in nursing care. Deliberate nursing care was carried out by the nurse for specific patients in order to help the patient meet unmet needs. Nursing care which was not deliberate was considered automatic nursing care; that is, the nursing activities, such as morning hospital routines or the performance of medical orders, were performed without consideration of the patient's needs. This division of nursing activity implied an independent aspect of nursing practice.

Orlando (1961) characterized nursing as being aligned with medicine in that nursing was concerned with patients

undergoing medical treatment or supervision. Additionally basic and applied sciences were used by the nurse, according to Orlando. Orlando contended that a broader knowledge base would provide the nurse with greater resources to use in helping the patient. The nurse was responsible for helping patients meet their needs while they were receiving medical attention. In order to do this the nurse would identify the unmet needs of the patient and then design nursing care specific for the attainment of the identified needs. Patients could experience unmet needs from physical limitations, adverse environmental reactions, and experiences which prevented the patient from communicating his needs. If adequate and effective nursing care were provided, the patient should demonstrate improvement.

Orlando's (1961) model expanded several concepts advocated by Peplau (1952) and provided more insight concerning how to determine, plan, and deliver deliberate nursing care. However, Orlando (1961) delimited nursing to caring for patients receiving medical care or supervision and did not provide direction for nurses concerned with healthy individuals or nurses with expanded roles. The process of nursing was addressed by Orlando, but specific direction concerning how to assess, plan, and evaluate

nursing care was not described. Orlando also addressed several major issues which nursing had begun to scrutinize, such as where nursing knowledge originates, and what differentiates nursing from other health professions.

Weidenbach's (1964) nursing model attempted to systematically describe what nurses do and what is nursing, and incorporated similar concepts of nursing which Orlando (1961) and Peplau (1952) had addressed. Weidenbach (1964) upheld the interpersonal approach to nursing and the notion that the nurse aids the patient in the attainment of unmet needs.

Nursing was defined by Weidenbach (1964) as a "helping art" comprised of deliberate actions which focused on the patient's perceptions of his/her condition and his/her physical needs. There were three integral parts of nursing practice: knowledge, judgement, and skill (Weidenbach, 1964). Additionally the practice of nursing occurred in phases which were (a) identification of the patient's needs, (b) supplying the help needed, (c) validation that the help was appropriate, and (d) coordination of the resources needed and the help provided. These phases described the practice of clinical nursing and represented a description of the nursing process. The "art" of nursing was the analysis of information based on the nurse's

perceptions and professional judgement (Weidenbach, cited in Fitzpatrick & Whall, 1983). Deliberate nursing actions resulted from the nurse's perceptions and judgement and were based on the patient's behavior. Weidenbach (1964) related the concepts of deliberate nursing action, patient needs, interpersonal focus, and the nursing process which had been identified in previous theoretical activity. Weidenbach's model provided further development of the nursing process and maintained that nursing was client-centered. The nursing process indicated a particular problem solving method for nurses and implied and supported the uniqueness of nursing.

## Methodological Approaches to Nursing

Further support and clarification of independent aspects of nursing practice was generated by the development of the nursing process, including nursing diagnosis. Methodological approaches to nursing as proposed by McCain (1965) and Henderson (1966) supported the notion of a systematic nursing process. According to McCain (1965), nursing lacked a precise method to determine appropriate nursing care for clients. McCain indicated that nursing practice should originate and be directed by data collected from assessment rather than the nurse's intuition. A scheme for assessing a client's nursing needs

was developed, and McCain noted that determination of a client's needs would serve as a basis for planning and evaluating nursing care. While this approach to nursing was not a direct attempt to define the profession, it does represent an attempt to systematize a functional approach to nursing. The nursing process was recognized as being a critical element characteristic of the practice of nursing.

McCain's (1965) assessment scheme provided an initial method which allowed nurses to use a patient-centered approach to determine nursing care. The assessment scheme which McCain proposed included specific patient factors and functions concerning 13 functional areas including the "patient's social, mental, emotional, body temperature, respiratory, circulatory, nutritional, elimination, reproductive status; state of rest and comfort; state of skin and appendages; sensory perception; and motor ability" (p. 83). The assessment plan provided nurses with a method to determine the client's therapeutic goals. The assessment scheme, however, did not provide direction for planning, implementing, and evaluation of nursing care. McCain not only designed one of the first methods regarding a specific process for nursing, but the assessment scheme represented nursing's initial assertive efforts to

delineate areas of the client's health care specific to the domain of nursing practice.

Henderson (1966) created a description of nursing which extended both the ideas of deliberate nursing care and further contributed to the development of the nursing process. Henderson (1966) defined nursing in terms of its functions but emphasized that nursing functions were client-centered. A list of 14 basic human needs was devised by Henderson and represented areas in which actual or potential problems could occur. Examples of several human needs identified by Henderson include breathing normally, eating adequately, moving and maintaining desirable positions, worshipping according to one's faith, and working with a sense of accomplishment. Henderson proposed that nursing care was deliberate: it is planned, implemented, and evaluated. The nurse would assist the client according to the list of human needs and attempt to promote the client's independence through nursing care implemented for specific deficit needs.

The conceptualization of nursing presented by Henderson (1966) is believed to predate the formal development of the nursing process (Fitzpatrick & Whall, 1983). Henderson (1966) regarded the list of 14 basic human needs as reflecting the functions or components of

nursing. This framework not only implied that nursing had a unique process but further distinguished areas of health care with which nursing was concerned.

The nursing process was formally recognized by Yura and Walsh (1973) as consisting of four phases which included (a) assisting, (b) planning, (c) implementing, and (d) evaluating. The nursing process was "the designated series of actions intended to fulfill the purposes of nursing" (Yura & Walsh, 1973, p. 42). Independent aspects of nursing practice were further actualized by formalization of the nursing process and nursing diagnosis.

According to Yura and Walsh (1978), the final step in the assessment phase of the nursing process is defining the nursing diagnosis. The nursing diagnosis is not a medical diagnosis nor is it the same as the client's therapeutic goals (Yura & Walsh, 1978). Yura and Walsh (1978) asserted that a nursing diagnosis is "a statement of conclusion either tentative or definitive, drawn by the nurse after having assessed the client's status . . . and can be alleviated by nursing intervention" (p 32). The nursing diagnosis links the assessment phase to the planning phase as well as provides direction to the remaining phases of the nursing process.

The notion of a specific nursing process and nursing diagnoses supports that nursing practice is a distinct health care profession separate from medicine and other health care professions. However, disagreement concerning the use and content of nursing diagnoses occurred, emphasizing the lack of specific criteria to direct nurses in using nursing diagnosis.

In 1973 the First National Conference Classification of Nursing Diagnosis was held in response to the lack of universal acceptance of nursing diagnosis and the existence of varying terminology and philosophies regarding nursing diagnosis. The goal of this conference was to prepare a comprehensive system for classifying the health status of clients diagnosed by nurses and which requires nursing intervention (Gebbie & Lavin, 1975).

Gebbie and Lavin (1975) contended that a classification system was necessary to determine and substantiate criteria for legitimate nursing diagnosis. A standard classification system of nursing diagnosis would additionally aid nurses in directly focusing on phenomena which are essential in determining nursing's contribution to health care and communicate the dimensions of nursing practice, rather than the ways in which it is performed (Gebbie & Lavin, 1974). Roy (1975) supported the

development of a diagnostic classification system for nursing and noted it to be an essential step in the development of nursing science. Dodge (1975) concurred regarding the necessity for a taxonomy of nursing diagnosis and stated that the taxonomy would facilitate objectives of nursing care and quality assurance criteria. A classification of nursing diagnosis seemed to hold great potential for nursing.

The Sixth National Conference Classification on Nursing Diagnosis was held in 1984. The cumulative efforts of these six conferences has produced a published list of 51 approved nursing diagnoses. The list represents the beginning, perhaps, of a classification of nursing diagnoses, rather than a comprehensive system. Criticism regarding nursing's effort to establish a classification system has resulted. Resler (1982) pointed out that a published diagnosis is not always amenable to specific client problems and must be altered to provide individualized patient care. Many of the published diagnoses have not been written using consistent guidelines (Resler, 1982). Shamansky and Yanni (1983) found little or no evidence to support that a nursing diagnosis taxonomy has (a) facilitated data collection nor standardized care, (b) improved communication with other health care

professionals, (c) clarified nursing's role for the public, or (d) promoted professional autonomy. A taxonomy of nursing diagnoses would have potential for promoting the independent aspects of practice, if it would list the phenomena which nurses treat. However, a classification system has not yet been developed which fulfills the expected goals previously noted.

## Current Approaches Supporting Independent Aspects of Nursing Practice

The Social Policy Statement (American Nurses' Association, 1980) was generated in order to define the nature and scope of nursing practice and to describe the characteristics of specialization in nursing. Steel (1984) declared "the statement is a blueprint for current and future designs for nursing practice" (p. 4). The purpose of the Social Policy Statement was to provide a statement of nursing's social responsibility, to inform the public, and to promote unity in nursing in a basic common approach to the practice of nursing.

The statement defined nursing as "the diagnosis and treatment of human responses to actual or potential health problems" (p. 9). Four defining characteristics of nursing are associated with this definition: phenomena, theory application, nursing action, and evaluation. Phenomena

which are of concern to nurses include any observable client state that can be scientifically explained or described and is within the limits of nursing practice (American Nurses' Association, 1980). It is interesting to recollect Lesnik's (1954) functional description of nursing. Lesnik (1954) specified that professional nursing activity included "observation of symptoms and reactions including limited responsibility to diagnose " (p. 1485) and the performance of nursing procedures and techniques. The Social Policy Statement echoes somewhat this previous description of nursing practice. The statement is significant nonetheless in that nursing is asserting and supporting its own autonomous practice.

The Social Policy Statement delineated nursing as a distinct health care profession with its own distinct methods of practice, namely the nursing process. The nursing process appears to be a significant hallmark of the practice of nursing and includes data collection, diagnosis, planning/treatment, and evaluation. The phenomena and core of nursing are the human responses to actual or potential health problems. A partial list of human responses amenable to nursing is included in the statement; however, this is not comprehensive nor specific. The Social Policy Statement portrays the defining

characteristics of nursing that are closely associated with the nursing process and standards of nursing practice. The description provides only a general definition of nursing. Neither the specific nature of nursing nor the specific phenomena applicable to nursing are pinpointed by the Social Policy Statement (American Nurses' Association, 1980).

Gartland's (1982) Schema for Classification was developed to measure the congruency of the etiology component of the nursing diagnosis and the corresponding nursing intervention. The Schema for Classification was developed from concepts espoused by Peplau (1952), Orlando (1961), and Orem (1980), and was based on the assumptions of the Nursing Process Model (Ziegler, Vaughn-Wrobel, & Erlen, in press). These assumptions include that (a) the nursing process is the methodology for providing nursing care, (b) steps of the nursing process are interrelated, (c) the nursing diagnosis serves as a pivotal point of the nursing process, (d) each step of the nursing process results in a product, and (e) nursing practice includes independent and interdependent functions.

The Schema for Classification (Gartland, 1982) has nine general categories reflecting corresponding etiology components of nursing diagnoses, nursing interventions, and

the derivation of each category. This instrument provides direction for nurses to plan appropriate interventions for the etiology component of the nursing diagnosis and has significant potential for characterizing the practice of nursing. Included in Gartland's (1982) classification system are concepts regarding the client and the nurse which appear inherently essential regarding a definition or description of nursing practice. Gartland also emphasized the important association of nursing diagnosis and the nursing process. The nursing process cannot be implemented unless the etiology of the nursing diagnosis is clear, concrete, and changeable. A description of nursing is reflected by Gartland's Schema for Classification in that the categories of etiologies and corresponding nursing interventions reflect human responses amenable to nursing intervention. The categories, however, are not exhaustive or mutually exclusive.

The proposed taxonomy of independent nursing interventions and corresponding etiologies related to direct patient care would extend Gartland's (1982) classification system. The taxonomy would incorporate concepts regarding the client and the nurse in order to generate general categories reflective of patient responses amenable to nursing and nursing interventions which

correspond to client responses. The review of previous methods utilized to define or classify nursing practice indicated that concepts concerning the client and the nurse were both essential. The nursing process and nursing diagnosis also appear to be key concepts in clarifying and developing the autonomous role of the professional nurse.

## Summary

Chapter II has presented significant attempts to depict the nursing profession, yet an acceptable definition of nursing practice has not been developed. Nightingale (1859/1980) depicted nursing as separate from medicine and provided a functional description of nursing. Lesnik (1954) also used a functional description in attempting to clarify the role of the professional nurse. Lesnik's functional classification of nursing was among the first to characterize professional nurses as having an autonomous practice component.

Another method to describe nursing was developed by Abdellah et al. (1960), and the list of 21 nursing problems focused on the client rather than the activities of the nurse. The list of 21 nursing problems represented a functional approach for clients rather than a description of nursing, and raised questions concerning how to implement nursing practice.

Nursing models provided an abstract description of nursing using client-centered concepts and nursing role concepts. Early nursing models (Orlando, 1961; Peplau, 1952; Weidenbach, 1964) emphasized that nursing care was deliberate and client-centered. The nursing process was identified as the problem-solving method used by nurses. Methodological approaches, such as McCain's (1965) assessment scheme, Henderson's (1966) list of 14 basic human needs, and the formalization of the nursing process by Yura and Walsh (1973) contributed to identifying and delineating the independent aspects of nursing; however, a clear description of nursing was not provided.

Current efforts to more clearly describe nursing include the Social Policy Statement (American Nurses' Association, 1980) and continuing development of a taxonomy of nursing diagnoses. Thus far, only a broad and general definition of nursing has been provided. Professional nursing has been recognized as having a distinct and autonomous practice component. Seemingly, concepts concerning the client, the nurse, nursing diagnosis, and the nursing process are essential in describing nursing. Further development of independent aspects of nursing would appear to benefit from a classification system of

etiologies and nursing interventions, as the interaction and role of the nurse would be more clearly depicted.

# CHAPTER III

## PROCEDURE FOR COLLECTION AND TREATMENT OF DATA

The research design utilized for this study was an exploratory, descriptive methodological design. Descriptive nursing research describes phenomena related to nursing and may result in a list, classification, or other type of description (Polit & Hungler, 1983). Exploratory research is directed toward the discovery of relationships and attempts to provide an understanding of phenomena. Exploratory research is particularly useful when a new area or phenomena is being investigated. Polit and Hungler (1983) noted that both descriptive and exploratory research "share in common the absence of theory" (p. 24), and further theoretical development may result from exploratory and descriptive research. According to Polit and Hungler (1983), "methodological research refers to controlled investigations of the ways of obtaining, organizing, and analyzing data . . . and are addressed to the development, validation, and evaluation of research tools and techniques" (p. 214).

A research design in which data can be collected and analyzed in a systematic manner must be utilized in order

to construct a classification of etiology specific independent nursing interventions related to direct patient care. This investigation represents initial efforts to develop a taxonomy for nursing interventions. The exploratory, descriptive methodological design was appropriate for this research study.

## Setting

The setting of this study was a Southwestern university with multiple campuses which offers undergraduate and graduate nursing degree programs. The study was conducted at a satellite campus located in a large metropolitan area; however, the literature utilized for research data reflects diverse perspectives regarding nursing from varied geographical locations in the United States.

## Population and Sample

The target population of this study was nursing literature regarding nursing diagnosis, nursing process, and nursing models. The accessible population was nursing literature concerning nursing diagnosis, nursing models, and nursing process which were readily available to the investigator.

A nonprobability, convenience sample was utilized for the investigation. The sample was comprised of published

nursing literature considered to be significant or classic publications. The sample included 8 sources of nursing diagnosis literature, 12 nursing models, and 10 sources of nursing process literature. The nursing diagnosis literature included books, nursing journal articles, and specific chapters from books regarding nursing diagnosis. Nursing process literature included in the sample incorporated published books rather than journal articles, in order to extrapolate a maximum amount of data. The nursing models used in the sample reflected a variety of available sources.

## Protection of Human Subjects

This study was exempt from review by the Texas Woman's University Human Research Review Committee (Appendix B). The data utilized for this investigation was derived from published nursing literature and, thus, no human subjects were utilized. Permission to conduct the study was obtained from the graduate school of Texas Woman's University (Appendix C).

## Instruments

Six instruments were used for this study. All instruments were designed by the investigator and provided a method to organize and summarize data collected to meet

each research objective. Instruments were presented in the form of summary tables.

### Differentiation of Nursing Diagnoses from Other Health Care Diagnoses by Nursing Diagnosis Literature

The first instrument (Appendix D) provided a method to summarize how nursing diagnoses were differentiated from diagnoses made by other health care professionals. The data summarized by Instrument 1 were derived from nursing diagnosis literature.

### Differentiation of Nursing Interventions Directed by Nursing Diagnoses and Nursing Interventions Directed by Other Health Care Professionals' Diagnoses

The second instrument (Appendix D) provided a summary of data collected from nursing diagnosis literature. This instrument summarized how nursing interventions directed by nursing diagnoses were differentiated from nursing interventions directed by diagnoses made by other health care professionals.

### Summary of Nurse's Role and Source of Client Difficulty Inferred from Nursing Models

The concepts of source of client difficulty and nurse's role inferred from nursing models were summarized

in Instrument 3 (Appendix D). The nursing model concepts which were related to direct patient care as determined by the investigator were recorded in this instrument.

### Summary of Independent Nursing Interventions and Corresponding Etiologies Cited in Nursing Models

Instrument 4 (Appendix D) summarized independent nursing interventions and corresponding etiologies which were reflected by nursing models. The investigator's judgment determined nursing interventions as independent based on the definition of independent nursing interventions derived in research objective 2.

### Summary of Independent Nursing Interventions and Corresponding Etiologies Inferred from Nursing Process Literature

Instrument 5 (Appendix D) summarized independent nursing interventions and corresponding etiologies which were extrapolated from nursing process literature. The investigator determined nursing interventions as independent based on the definition of independent nursing interventions formulated in research objective 2.

## Categorization of Nurse's Role-Source of Client Difficulty Sets and Etiology-Intervention Sets

Data from Instruments 3, 4, and 5 were organized into categories of nurse's role-source of client difficulty sets and corresponding subcategories of etiology-intervention sets. Instrument 6 (Appendix D) was used to present this organization.

## Data Collection

Data collection began after the approval of the thesis committee through the Human Subjects Review Committee regulations and approval through the graduate school of Texas Woman's University. The data collection was organized around the seven research objectives.

### Objective 1

To achieve research objective 1, the investigator selected and reviewed eight major sources of nursing diagnosis literature and extrapolated (a) how nursing diagnoses are differentiated from other health care professionals' diagnoses, and (b) how nursing interventions directed by nursing diagnoses are differentiated from interventions directed by diagnoses made by other health care professionals. Instrument 1 summarizes how nursing diagnoses are differentiated from other health care professionals' diagnoses. Instrument 2 was used to summarize

the differentiation of nursing interventions directed by nursing diagnoses and nursing interventions directed by diagnoses made by other health care professionals as reflected from each source of nursing diagnosis literature.

Objective 2

To achieve research objective 2, definitions of independent and interdependent nursing interventions were formulated by the investigator. Data collected in objective 1 were utilized to define independent and interdependent nursing interventions.

Objective 3

To achieve research objective 3, the investigator reviewed 12 nursing models and determined the concepts of (a) nurse's role and (b) source of client difficulty from each nursing model. The data collected from nursing models were related to direct patient care and were summarized in Instrument 3. Instrument 4 was to be utilized to summarize any independent nursing interventions which were included in each nursing model.

Objective 4

In order to achieve research objective 4, 10 sources of nursing process literature were reviewed for nursing interventions related to direct patient care and

corresponding etiologies. The investigator determined if the nursing interventions were independent or interdependent based on the definitions derived in objective 2. Instrument 5 was used to summarize independent nursing interventions and corresponding etiologies in the nursing process literature.

## Objective 5

To achieve research objective 5, the investigator combined the data summarized by Instruments 3, 4, and 5. Etiology-intervention sets which corresponded to nurse's role-source of client difficulty sets were grouped into categories of nurse's roles and sources of client difficulty, and categories of etiologies and corresponding interventions. Instrument 6 presented this reorganization of data.

## Objective 6

The taxonomy of etiology independent nursing interventions was constructed from the data included in Table 6. Similar etiology-intervention sets and nurse's role-source of client difficulty sets were utilized as the basis for determining categories of nurse's roles and sources of client difficulty and corresponding independent nursing interventions and etiologies. Etiology-intervention sets or nurse's role-source of client difficulty sets

which were not applicable to previously determined categories were used as the basis for a new category. Operational definitions and examples of independent nursing interventions specific for the corresponding etiology were to be included in the nursing intervention columns.

Objective 7

The etiology-intervention categories were matched to corresponding categories of nurse's role-source of client difficulty categories. The etiology-intervention categories were separated into distinct categories and the interventions were described as clearly as possible.

## Treatment of Data

Systematic collection and organization of data were performed to meet each of the research objectives. Research instruments in the form of tables provided descriptive summaries reflecting data collection and data analysis. The investigator's judgment had significant effect on the final development of the taxonomy.

# CHAPTER IV

# ANALYSIS OF DATA

An exploratory, descriptive methodological study was conducted to develop a taxonomy of etiology-specific independent nursing interventions related to direct patient care. This chapter presents results of the data analysis. First, the sample is described. Next, the findings are reported under each of the research objectives. Finally, a summary of the study findings is presented.

## Description of Sample

The nonprobability sample was selected by the investigator from accessible nursing literature and included 8 sources of nursing diagnosis literature, 10 sources of nursing process literature, and 12 nursing models. The nursing diagnosis literature included in the sample was comprised of books, nursing journal articles, and specific chapters in books regarding nursing diagnosis. These sources have frequently been referred to and referenced in publications dealing with nursing diagnosis. The eight sources of nursing diagnosis literature utilized for this study were Aspinall (1976), Carlson et al. (1982),

Carnevali (1983), Gordon (1982), Kim and Moritz (1982), Lengel (1982), Mundinger and Jauron (1975), and Soares (1978). Two sources of nursing diagnosis literature (Carnevali, 1983; Gordon, 1982), were also utilized as nursing process literature, since each source referred to nursing diagnosis as an integral part of the nursing process and included information which dealt with both nursing process and nursing diagnosis.

Ten sources of nursing process literature were selected for use in the sample because the publications were considered by the investigator to reflect current developments concerning the nursing process. Specifically, the nursing process literature used for this study included Aspinall and Tanner (1981), Bower (1982), Carnevali (1983), Carpenito (1983), Gordon (1982), Griffith and Christensen (1982), LaMonica (1979), Leonard and Redland (1981), Mayers (1983), and Yura and Walsh (1982).

Twelve nursing models were included in the sample. The nursing models utilized for this study were Henderson (1966), Johnson (1980), King (1981), Levine (1967), Neuman (1982), Nightingale (1859/1980), Orem (1980), Orlando (1961), Peplau (1952), Riehl (1980), Rogers (1970), and Roy (1976).

## Findings

Research objectives rather than a hypothesis were utilized for this investigation. Six instruments were designed by the investigator to provide a method to organize and summarize data. The research instruments are presented in the form of tables.

### Research Objective 1

To achieve research objective 1, the investigator selected and reviewed eight sources of nursing diagnosis literature in order to extrapolate from each source (a) how nursing diagnoses are differentiated from other health care professionals' diagnoses and (b) how nursing interventions directed by nursing diagnoses are differentiated from nursing interventions directed by diagnoses made by other health care professionals.

Table 1 summarizes data from each source of nursing diagnosis which reflected how nursing diagnoses are differentiated from other health care professionals' diagnoses. All eight sources contained a definition of nursing diagnosis. Carlson et al. (1982), Gordon (1982), Lengel (1982), Moritz (1980), and Soares (1978) specified nursing diagnoses are within the domain of nursing. Soares (1978), Aspinall (1976), Lengel (1982) and Carlson et al. (1982) pointed out that nursing diagnoses are a description

Table 1

Definitions of Nursing Diagnosis and Other Health Care Professionals' Diagnoses by Source

| Source | Definition of nursing diagnosis | Definition of other health care professionals' diagnoses |
|---|---|---|
| Gordon (1982) | A nursing diagnosis describes actual or potential health problems which nurses by virtue of their education and experience are capable and licensed to treat. | Medical diagnosis is the diagnosis of disease. Social work diagnoses describe social dilemmas in the context of the client's interaction with the world. |
| Soares (1978) | A nursing diagnosis defines altered patterns of human functioning and are within the independent aspects of nursing practice. Nursing diagnosis are differentiated from other diagnoses by the particular frame of reference (conceptual framework) used to define the state of the patient. This frame of reference includes the knowledge that is needed to identify and solve particular problems within the domain of the discipline's field. | Medical diagnosis concerns the pathological state of the patient and/or the pathological organ functioning that can be alleviated by surgery or pharmacodynamics. Physicians can independently treat medical diagnoses. |
| Mundinger & Jauron (1975) | Nursing diagnosis is a statement of a patient's response which is actually or potentially unhealthful and which nursing intervention can help to change in the direction of health. | Not addressed. |
| Aspinall (1976) | Nursing diagnosis is a process of clinical inference from observed changes of a patient's health status; it is not a medical diagnosis. Nursing diagnoses will indicate impaired functioning of body systems. | Medical diagnosis tends to focus on defining the cause of a patient's health impairment. |

(table continues)

| Source | Definition of nursing diagnosis | Definition of other health care professionals' diagnoses |
|---|---|---|
| Lengel (1982) | Nursing diagnosis is a phrase summarizing the patient's actual or potential altered functioning which nurses by virtue of their education and experience are capable and licensed to treat. | Medical diagnosis is the identification of pathology. |
| Carlson, Craft & McGuire (1982) | Nursing diagnosis is a statement of a potential or actual altered health status which is determined by nursing assessment and requires nursing intervention. | Medical diagnoses focus on pathology treatment and cure of disease. |
| Carnevali (1983) | Nursing diagnoses identify target areas of affected daily living, deficits in resources (external or internal), causes of the deficits and acute of chronic time lines. The focus of diagnosis and treatment differentiates one health care discipline from another. | Medical diagnoses focus on pathophysiology or psychopathology. Biomedical diagnosis identify target organs, pathology, and acute/chronic course of the disease. |
| Bircher (1978) | "Nursing diagnosis is a concise summary, a conceptual statement of the clients health status" (p. 34). | "Medical diagnosis involves the process of identifying the nature of a disease through examination" (p. 33). |
| Moritz (1980) | "Nursing diagnoses are responses to actual or potential health problems which nurses by virtue of their education and experience are able, licensed and legally responsible and accountable to treat" (p. 53). Nursing diagnosis are not medical diagnosis and nurses are not responsible or accountable for treating medical diagnoses without appropriate medical supervision. | Not addressed. |
| Jones, P. (1978) | Mundinger and Jauron's (1975) definition was utilized. | Medical diagnoses reflect the medical problems and are classified according to the ICD. |

(table continues)

| Sources | Definition of nursing diagnosis | Definition of other health care professional's diagnosis |
|---|---|---|
| Roy (1978) | "Nursing diagnosis is a concise phrase or term summarizing a cluster of empirical indicators representing patterns of unitary man" (p. 219). | Not addressed. |

or statement of altered patterns of human functioning, altered health states or impaired functioning of a body system. Major points which were supported by the definitions of nursing diagnoses were that nurses can treat the etiologies of nursing diagnosis statements, the nursing diagnosis deals with actual or potential health problems, and nursing diagnoses describe impaired or altered human functioning.

Table 1 includes definitions of medical diagnosis found in all the sources of nursing diagnosis except Mundinger and Jauron (1975). Medical diagnoses were defined as statements concerning pathology or disease (Bircher, 1978; Carlson et al., 1982; Carnevali, 1983; Gordon, 1982; Lengel, 1982; Soares, 1978, Jones, 1978). Aspinall (1976) and Moritz (1980) specifically noted that nursing diagnoses are not medical diagnoses.

Table 2 was used to summarize data from each source of nursing diagnosis which reflected how nursing interventions directed by nursing diagnosis were differentiated from nursing interventions directed by the diagnosis of other health care professionals. Aspinall (1976) did not address either of these issues, and this is indicated in Table 2. Four sources (Gordon, 1982; McLane, 1980; Mundinger & Jauron, 1975; Soares, 1978) specified that nursing

Table 2

Summary of Nursing Interventions by Type of Diagnosis by Source

| Source | Interventions directed by nursing diagnosis | Interventions directed by diagnosis of other health care professionals |
|---|---|---|
| Gordon (1982) | Nursing interventions directed by nursing diagnosis are within the independent practice of nursing and involve assisting the client with human functioning. Nursing interventions directed by nursing diagnosis are activities the patient would do for himself if able. | Nursing activities directed by medical diagnosis:<br>(1) are medically delegated tasks,<br>(2) are activities to carry out the medical care plan,<br>(3) are assisting the physician to treat the medical diagnosis. |
| Mundinger & Jauron (1975) | Nurses are responsible for diagnosing and treating human responses to health problems. Independent nursing actions are associated with nursing diagnosis. | Not addressed. |
| Lengel (1982) | Nursing interventions directed by nursing diagnosis are used to individualize nursing care. | Nursing interventions related to the medical diagnosis are considered assisting with the medical treatment plan. |
| Moritz (1980) | Not addressed. | Nursing tasks which are primarily physician directed are considered collaborative. |
| McLane (1980) | "The conclusion or judgement that results from a nursing assessment is limited to those activities which are legally within the province of the professional" (p. 107). | Not addressed. |
| Carnevali (1983) | Nursing orders are not delegated medical functions. | Nurses are considered extenders of other professional's practice when nurses act as "functionaries accountable to other professionals, carrying out their decisions and prescriptions--they are 'go-fers'" (p. 6). |

(table continues)

| Source | Interventions directed by nursing diagnosis | Interventions directed by diagnosis of other health care professionals |
|---|---|---|
| Carlson, Craft & McGuire (1982) | Intervention is the use of nursing therapies necessary to accomplish the defined plans and promote adaptation of the individual, families, and community. | Not addressed. |
| Soares (1978) | Nursing interventions directed by nursing diagnoses are within the independent practice of nursing and pertain to assisting the client with his human functioning. | Nursing interventions directed by medical diagnoses are medically delegated tasks. The nurse functions as a physician's assistant when performing medically delegated tasks. |
| Aspinal (1976) | Not addressed. | Not addressed. |

interventions directed by nursing diagnosis were within nursing's independent practice and within the legal practice of nursing. All of the sources of nursing diagnosis except Carnevali (1983) described or referred to nursing interventions specifically directed by medical diagnosis. Nursing activities directed by medical diagnosis were considered as assisting the physician (Gordon, 1982; Lengel, 1982; Soares, 1978) or collaborative (Moritz, 1980). Nursing interventions directed by the diagnosis of another health care professional were not considered part of nursing's independent practice.

## Research Objective 2

The second research objective was to define independent and interdependent nursing interventions. The data presented in Table 1 and Table 2 were used by the investigator to formulate the following definitions.

Independent nursing interventions are specifically related to treating the etiology of the nursing diagnosis and are planned, initiated by, or performed by professional nurses without the supervision or guidance of another licensed health care professional. Independent nursing interventions are under the cognitive control of the professional nurse, are reflected in the nursing care plan

and do not include prescriptive pharmacology, radiation, or surgical intervention.

Interdependent nursing interventions are activities delegated to the nurse as directed and legally sanctioned by medical verbal or written orders, standing medical or hospital/organization protocols which require the supervision of another licensed health care professional in order to treat a diagnosis initiated by another health care professional. Interdependent nursing interventions include dispensing and administering prescriptive medication, radiation, and surgical interventions, or other delegated activities which are not within the legally defined practice of nursing. Interdependent nursing interventions do not require nursing diagnosis. Nurses are not legally responsible for, nor accountable for, treating medical diagnoses unless there is appropriate supervised management. The definitions for independent and interdependent nursing interventions were used to distinguish whether nursing interventions extrapolated from nursing process literature were considered by the investigator as independent or interdependent.

## Research Objective 3

The third research objective was to summarize from 12 nursing models the concepts of (a) nurse's role, (b) source

of client difficulty, and (c) any independent nursing interventions and corresponding etiologies, if any, which were related to direct patient care. Table 3 presents this summary.

The source of client difficulty was defined as the investigator's determination of the source or cause of deviations from the desired state identified by nursing model theorists. The nurse's role was defined as the investigator's determination of the actual role of the nurse identified by nursing model theorists. Table 3 reflects the source of client difficulty and nurse's role inferred by the investigator from each nursing model.

Several nursing models have undergone more development than others, and the level of specificity varied greatly. The source of difficulty of Riehl's (1980) nursing model was unclear from explicit theoretical assumptions in the model and could not be determined. Orem (1980), however, provided an eclectic list of specific etiologies arising from three areas of self-care needs which included universal, developmental, and event-type self-care needs. A general description of Orem's (1980) source of difficulty has been provided in Table 3.

Activities which were considered data collection or interdependent activities by the investigator were included

Table 3

Source of Client Difficulty and Nurse's Role by Nursing Model

| Nursing model | Source of client difficulty | Nurse's role |
|---|---|---|
| Henderson (1966) | Unmet needs due to lack of knowledge, lack of capacity to fulfill own needs, or lack of will. | Help client meet unmet needs by teaching, altering environment or supplying the help so client can function according to the 14 components of basic nursing care: (1) breathe normally; (2) eat and drink adequately; (3) eliminate body waste; (4) move and maintain desirable positions; (5) sleep and rest; (6) select appropriate clothing--dress and undress; (7) maintain body temperature within normal range; (8) keep body clean, well groomed and protect integument; (9) avoid changes in environment and injuring others; (10) communicate with others expressing emotions, needs, fears, or opinions; (11) worship according to one's faith; (12) work with a sense of accomplishment; (13) play or recreate; (14) learn, discover, or satisfy the curiosity which leads to normal development, health, and use the available health care facilities. |
| Johnson (1980) | Inadequate system or subsystem development, ineffective or absent internal regulatory mechanisms, exposure to noxious influences, inadequate system stimulation, and lack of adequate environmental input. | Repair the structural unit by teaching, imposing control mechanisms, providing resources, or promoting appropriate environmental conditions or resources. |
| King (1981) | Inability to meet basic needs or function in social roles due to internal and external environmental sources. | Establish goals with client and a method or plan to achieve goals. |
| Levine (1967) | Acute or chronic disease, structural changes, functional changes, social isolation or deprivation, threats to personal integrity. | Promote conservation of energy, structural integrity, personal integrity, and social integrity. Includes positioning, maintenance of personal hygiene, range of motion and passive exercise, assurance of privacy, and teaching. |

(table continues)

| Nursing model | Source of client difficulty | Nurse's role |
|---|---|---|
| Neuman (1982) | Actual or potential stressors (interpersonal, intrapersonal or extrapersonal in nature) which impinge upon and/or penetrate the normal line of defense, disturbing equilibrium and reducing the ability to cope with additional stressors. | Strengthen the individual's defense or help the individual to respond appropriately to retain, attain, or maintain system stability. Examples of nursing action include implementing, monitoring, integrating, coordinating, supporting, planning, and organizing. |
| Nightingale | Environmental factors which interfere with the healing process or health of an individual. | Management of the patient's environment. |
| Orem (1980) | Change in human structure, physical functioning and/or behavior, and habits of daily living due to disease, injury, disfigurement, disability, and medical care measures. | 1. Acting for or doing for another;<br>2. Guiding another (i.e. decision-making or supervised activity);<br>3. Supporting another (i.e. avoidance of failure or difficult situations);<br>4. Providing an environment which promotes personal growth;<br>5. Teaching. |
| Orlando (1961) | Unmet needs. | Supply the help a client requires in order for his needs to be met--instructing, explaining, suggesting, directing, informing, requesting, making decisions for changing the immediate environment. |
| Peplau (1952) | Unmet needs or a conflict of goals, i.e. anxiety. | Stranger, resource person, teacher, leader, surrogate, counselor. |
| Riehl (1980) | The source of difficulty is unclear from explicit and implicit assumptions. | Role-taking and encourage the client and family to use role-taking. |
| Rogers (1970) | Interrupted or noncontinuous interaction between man and environment; out of rhythm with environment. | Repatterning. |
| Roy (1976) | Stimuli outside the individual's coping/adaptational capabilities. | Promote client's adaptation by external regulation to increase, decrease, or maintain stimuli affecting adaptation. |

in the nurse's role of several nursing models. Orlando (1961) noted that "questioning" and "administering medications" were specific ways to help the patient meet his/her own needs. However, questioning was considered by the investigator to be data collection and inherent in the nursing process rather than being an intervention. Nurses are not licensed to independently administer medications, and, therefore, this intervention was not considered an independent aspect of nursing practice. Consequently, these aspects of Orlando's nurse's role were excluded as a nurse's role for the present study.

Similarly, "evaluating" was excluded from the role of the nurse which Neuman (1982) included as being part of the nurse's role. Evaluating was not considered a nursing intervention by the investigator, but was considered the fifth step of the nursing process.

There were no independent nursing interventions and corresponding etiologies found in any of the theoretical nursing models. Any nursing interventions and corresponding etiologies included in any nursing models were to be recorded, determined as being independent or interdependent, and summarized in Instrument 6. Examples of patient case histories were presented in several secondary sources of nursing models. However, since these secondary sources

presented interpretations of nursing models and were not written by the original nursing theorist, they were not used. Instrument 6 was not utilized because data were not available.

## Research Objective 4

The fourth research objective was to identify independent nursing interventions and corresponding etiologies from relevant case studies included in 10 sources of nursing process literature. The definitions of independent and interdependent nursing interventions were used to classify nursing interventions included in patient case studies as independent or interdependent interventions.

Difficulties in completing research objective 4 as planned were encountered. Two sources (Aspinall & Tanner, 1981; Carnevali, 1983) could not be used to provide the needed data. Aspinall and Tanner (1981) presented case studies; however, nursing interventions were directed to medical etiologies. Examples of etiologies found in Aspinall and Tanner are gastrointestinal hemorrhage, ketoacidosis, and Addisonian crisis. Nursing interventions for medical etiologies were considered interdependent in nature and not appropriate for this study. Consequently, data from Aspinall and Tanner were not utilized. Carnevali (1983) did not include any patient case studies, and, therefore, no

nursing interventions and corresponding etiologies were derived from this source.

Nursing diagnoses were commonly used in the presentation of patient case studies, and nursing interventions considered appropriate for these patients were included. The association between the diagnostic statement and the nursing intervention was not always apparent. Determination of the etiology was difficult. In order to systematically infer etiologies for case studies, both the diagnostic statement and interventions were recorded on data collection forms. It was assumed that the diagnostic statement and nursing interventions would be associated with the etiology. The diagnostic statement was expected to contain the etiology which the nurse is trying to alleviate or change. Nursing interventions, directed at the etiology, are expected to change the patient's response by modifying the underlying cause which is the etiology. Nursing interventions were, therefore, expected to be directed toward the etiology. All etiologies were consequently inferred from the nursing diagnosis or nursing interventions. This was a departure from the original data collection proposal; however, a systematic approach for data collection was maintained.

The format for stating nursing diagnoses varied in the eight sources of nursing process literature. The etiology was not clearly stated or labeled as such in most formats used. Thus, the etiology had to be inferred from either the diagnostic statement or the nursing interventions. The nature of the data did not lend itself to a systematic method to infer the etiologies from the diagnostic statements and/or nursing interventions. In order that a systematic methodology was used to infer etiologies and nursing interventions, criteria based on reasoning were formulated. The following criteria for inferring (a) etiology-intervention sets from diagnostic statements and (b) nursing interventions from nursing process literature were utilized.

1. Medical diagnoses were not accepted as an etiology for independent nursing interventions, and medical diagnoses were, therefore, excluded.

2. Nursing interventions involving data collection, such as assessing and evaluating, were not considered interventions and were excluded.

3. One-component nursing diagnoses were considered to be an etiology if there were corresponding nursing interventions directed toward alleviating or changing the diagnosis. One component nursing diagnoses which did not

have such corresponding nursing interventions were excluded.

4. Etiologies which required interdependent nursing activities as the main source of treatment were excluded. This was based on the assumption that etiologies which are amenable to nursing interventions must be treated by independent nursing interventions. For example, the etiology of "ineffective airway clearance" required the nurse to suction the patient's tracheostomy PRN. This was not considered an etiology amenable to independent nursing interventions because suctioning is usually a standard order for a patient with a tracheostomy, even though there may have been independent interventions included such as positioning.

5. Etiologies were inferred from the nursing diagnoses if the etiology was contained in the diagnostic statement and nursing interventions corresponded to the etiology. If the association between the diagnostic statement and interventions was ambiguous, the nursing interventions were utilized to determine an implicit etiology.

6. Nursing interventions which included a wide range of nursing activities and did not support an explicit or implicit etiology were considered a "shotgun" approach to

nursing interventions, i.e., try everything. Shotgun nursing interventions were excluded because the interventions lacked specificity and did not support a clear etiology.

7. Teaching or instructing was inferred as the nursing intervention for the etiology of lack of knowledge or lack of understanding.

8. Etiologies or interventions which were vague or ambiguous were excluded.

9. Nursing interventions comprised of routine nursing activities reflecting a protocol rather than a specific patient care plan were excluded. Protocols do not individualize nursing care and are not directed at a specific nursing diagnosis or a specific etiology.

10. Normal or expected responses, such as grief resulting from the death of a spouse, were not considered appropriate etiologies and were excluded.

11. Multiple etiologies were inferred if there were nursing interventions directed toward two or more different etiologies. The different etiologies may or may not have been included in the nursing diagnosis.

One hundred nursing diagnoses and interventions were extrapolated from eight sources of nursing process literature. The definitions for independent and

interdependent nursing interventions were used to determine if the interventions extrapolated from the literature were independent or interdependent. There were eight diagnostic statements and interventions which resulted in two etiology-intervention sets. It was possible, therefore, that 108 etiology-interventions sets could have been inferred from the 100 diagnostic statements and interventions. However, 38 (35%) etiology-interventions sets were excluded using the protocol for inferring etiology-intervention sets from the nursing diagnoses and interventions. There were 70 etiology-intervention sets which were considered as having independent nursing interventions related to direct patient care. Table 4 summarizes the breakdown of the etiology-intervention sets derived from the 100 diagnostic statements and nursing interventions.

Of the 38 diagnostic statements and interventions which were excluded, 12 (32%) were considered to have interdependent nursing interventions. Examples of these interdependent nursing interventions included administering medications, referrals, and regulating intravenous therapy and respirators. There were 11 (29%) diagnostic statements and interventions which did not reflect a clear etiology. These were excluded because the relationship of the

Table 4

Summary of Etiology-Intervention Sets Inferred from One Hundred Diagnostic Statements and Interventions

| Summary of etiology-intervention sets | Frequency | Percentage |
|---|---|---|
| Etiology-Intervention sets with independent nursing interventions related to direct patient care | 70 | 65% |
| Total etiology-intervention sets excluded | 38 | 35% |
| Total possible etiology-intervention sets inferred from 100 diagnostic statements and interventions | 108 | 100% |

interventions and the diagnostic statement was ambiguous, and an etiology could not be inferred from the diagnosis or interventions. An example of this is the diagnostic statement of "respectful, trusting nurse/client relationship" (LaMonica, 1979, p.96). The nursing interventions pertained to the nurse sitting, talking, and listening to the patient. An etiology could not be inferred from the interventions or the diagnosis.

Six (16%) nursing diagnoses and interventions were excluded because a medical diagnosis or condition was the inferred etiology. These have not been included with the interdependent nursing intervention exclusions in order to show that medical diagnoses are, in fact, included in current nursing literature as viable nursing diagnoses. Examples of medical diagnoses exclusions included myocardial infarctions, potassium deficiency, and active pulmonary tuberculosis.

Four (11%) nursing diagnoses and interventions had multiple interventions which were considered a "shotgun" approach of nursing interventions. These interventions did not correspond with the diagnostic statement nor could a specific etiology be inferred. An example of a shotgun approach nursing intervention involved the nurse maintaining a positive attitude about a patient getting

well and allowing the family to verbalize their feelings. The diagnosis for these interventions was "severe feelings of rejection and abandonment due to admission against wishes" (Bower, 1982, p.212).

Two (5%) nursing diagnoses and interventions were excluded because the interventions involved data collection. Data collection is an essential part of the nursing process but is not considered a nursing intervention.

Two (5%) diagnostic statements and interventions were excluded because the interventions reflected a standard nursing protocol rather than individualized nursing care. Finally, the inferred etiology for one (3%) nursing diagnosis and intervention was considered a normal response rather than an actual or potential unhealthful response. Specifically, the diagnosis involved grief resulting from the loss of a body part, a response which would be expected. Grief was not indicated as being unhealthful by the diagnosis or interventions. This diagnosis and intervention was excluded. Table 5 presents a summary of the 38 excluded nursing diagnoses and interventions.

A total of 70 etiology-intervention sets were inferred from the 100 nursing diagnoses and interventions extrapolated from eight sources of nursing process

Table 5

Frequency and Percentage of Reason for Excluded Etiology-Intervention Sets

| Reason for exclusion | Frequency | Percentage |
|---|---|---|
| Interdependent interventions | 12 | 32% |
| Ambiguous etiologies | 11 | 29% |
| Medical diagnosis | 6 | 16% |
| Shotgun intervention approach | 4 | 11% |
| Data collection interventions | 2 | 5% |
| Standard nursing protocols | 2 | 5% |
| Etiology not unhealthful | 1 | 3% |
| Total exclusions | 38 | 100% |

literature. Fifteen (21%) etiology-intervention sets were inferred from Mayers (1983). Fourteen (20%) etiology-intervention sets were inferred from Griffith and Christensen (1982) and from LaMonica (1979), respectively. Thirteen (19%) inferred etiology-intervention sets were derived from Carpenito (1983), and 10 (14%) etiology-intervention sets were derived from Yura and Walsh (1982). Two (3%) inferred etiology intervention sets were derived from Leonard and Redland (1981). One (1%) etiology-intervention set was inferred from Bower (1982) and Gordon (1982), respectively.

Thirty-six (51%) of the 70 inferred etiology-intervention sets consisted of a lack of knowledge or understanding etiology and teaching, explaining or instructing intervention. These 36 lack of knowledge-teaching etiology-intervention sets were inferred from diagnoses and interventions from 6 sources of nursing process literature. No lack of knowledge-teaching etiology-intervention sets were inferred from relevant case studies from Gordon (1982) or Leonard and Redland (1981). Of the 36 lack of knowledge-teaching etiology-intervention sets, 10 (29%) were inferred from Griffith and Christensen (1982), 9 (26%) were inferred from LaMonica (1979), and 7 (20%) were inferred from Carpenito (1983). Six (17%) lack

of knowledge-teaching etiology-intervention sets were inferred from Mayers (1983). Three (9%) lack of knowledge-teaching etiology-intervention sets were inferred from Yura and Walsh (1982). One (3%) lack of knowledge-teaching etiology-intervention set was inferred from Bower (1982).

The remaining 34 (49%) inferred etiology-intervention sets reflected a variety of etiologies and independent nursing interventions. Ten (29%) were inferred from Mayers (1983), 7 (20%) were inferred from Yura and Walsh (1982), 6 (17%) were inferred from Carpenito (1983), 5 (14%) from LaMonica (1979), 2 (6%) were inferred from Leonard and Redland (1981), and 1 (3%) was inferred from Gordon (1982). Table 6 summarizes the total number of etiology intervention sets inferred by source, frequency, and type of classification sets.

The intended outcome of research objective 4 was to summarize the independent nursing interventions related to direct patient care and corresponding etiologies. Table 7 summarizes the etiology-interventions sets inferred from the nursing process literature. A single entry in Table 7 represents the 36 lack of knowledge-teaching etiology-interventions sets. The remaining lack of knowledge-teaching etiology-intervention sets are separately included in Table 8.

Table 6

Summary of Inferred Etiology-Intervention Sets by Source, Frequency, and Type of Classification Set

| Source | Etiology-Intervention Sets | | Type of Etiology-Intervention Sets | | | |
|---|---|---|---|---|---|---|
| | | | Lack of Knowledge-Teaching | | "Other" | |
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Mayers (1983) | 15 | 21% | 6 | 17% | 9 | 26% |
| Griffith & Christensen (1982) | 14 | 20% | 10 | 28% | 4 | 12% |
| LaMonica (1979) | 14 | 20% | 9 | 25% | 5 | 14% |
| Carpenito (1983) | 13 | 19% | 7 | 19% | 6 | 18% |
| Yura & Walsh (1982) | 10 | 14% | 3 | 8% | 7 | 21% |
| Leonard & Redland (1981) | 2 | 3% | 0 | 0% | 2 | 6% |
| Gordon (1982) | 1 | 1% | 0 | 0% | 1 | 3% |
| Bower (1982) | 1 | 1% | 1 | 3% | 0 | 0% |
| Totals | 70 | 100% | 36 | 100% | 34 | 100% |

Table 7

Summary of Independent Nursing Interventions and Corresponding Etiologies by Source

| Source | Etiology | Nursing intervention |
|---|---|---|
| | Lack of knowledge or understanding. | Teach, explain, instruct. |
| Carpenito (1983) | Unfamiliar surroundings. | Institute reality orientation by introducing familiar objects from home |
| | Inability to differentiate increased incoming stimuli | Reduce unfamiliar incoming stimuli by slowly explaining procedures and activities. |
| | Concern that husband is unable to manage household alone | Help patient and husband determine options for maintaining the household while patient is hospitalized. |
| | Potential for decubitus on back and heels | Thoroughly rinse soap from skin after bath; massage skin over bony prominences; protect heels under traction boot with protective skin barrier |
| | Potential for impaired circulation | Remind client to wiggle toes at least 10 times each hour |
| | Lack of diversional activities | Determine appropriate diversional activities for patient and encourage patient to do a variety of these activities |
| LaMonica (1979) | Decreased capacity for activity | Limit patient's activity to tolerable level--allow patient to rest as needed |
| | Lack of support | Support patient |
| | Potential for developing constipation | Record intake and output; check for bowel elimination every day. |
| | Potential for inadequate rest | Structure client's care to allow for client to rest undisturbed |

(table continues)

| Source | Etiology | Nursing intervention |
|---|---|---|
| | Lack of privacy | Provide privacy while patient using the commode |
| Griffith & Christensen (1982) | Maternal overprotection | Explore the client's feelings about her child doing things for herself and help her to devise a plan requiring her child to assume increasing responsibility for herself |
| | Potential safety hazards in the home | Help client take corrective measures |
| | Potential safety hazards in the home | Help client take corrective measures--nonslip tub surface, remove throw rugs, emergency telephone numbers by phone |
| | Difficulty coping with altered self-concept | Help client identify and utilize possible ways to cope with altered self-concept |
| Yura & Walsh (1982) | Inability to communicate treatment preference | Communicate the client's decision regarding treatment |
| | Potential difficulty coping with inability to perform role as usual | Explore alternative ways client can continue her "mothering" role |
| | Lack of planning alternative ways to perform role | Help client plan alternative ways to fulfill her roles |
| | Dependency on health care personnel for assistance with activities of daily living | Promote client's independence by having client plan and execute as much of her care as possible |
| | Potential impairment of skin integrity | Maintain position of comfort and good alignment, use floatation pad; Do active and passive range of motion exercises; Turn every 1-2 hours; Give client skin care after turning |
| | Alteration in bowel elimination | Do PRN digital exam to determine presence of hardened stool and fecal impaction if there has been no bowel movement |

(table continues)

| Source | Etiology | Nursing intervention |
|---|---|---|
| | Sensory deprivation | Promote and maintain sensory stimulation |
| | High level of anxiety | Maintain a calm manner, avoid overwhelming client with long detailed instructions |
| | Low level of anxiety | Generate a mild state of anxiety by reminding client he will have to assume responsibility for his medication when he is discharged |
| Mayers (1983) | Lack of trust of staff | Have one nurse per shift care for client and set up specific consistent ways of performing client's care |
| | Lack of visitors | Introduce patient to other patients on unit; Enlist parents' support to set up a rotating visiting schedule for friends; Spend more time with patient on days when visitors can not come |
| | Colostomy leakage | Take measures to prevent colostomy from leaking |
| | Immobility | Turn client every 2 hours during the day and every 3 hours at night; Keep a sheep-skin in contact with skin |
| | Frequent bathing | Decrease total body bathing to twice a week and wash specific body areas daily |
| | Immobility | Do range of motion of all joints BID |
| | Dry nares | Clease nares with warm water and soap BID: Apply lubricant cream to nares every 2 hours |
| | Lack of plans to care for hospitalized infant | Help client devise and establish plans to participate in care of hospitalized infant |
| | Potential for injury | Decrease to potential for injury in room and ensure precautions are taken to minimize safety risks, i.e. use good light, use of eyeglasses when ambulation. |

Table 8

Summary of Lack of Knowledge Etiology-Interventions Sets by Source

| Source | Etiology | Nursing intervention |
|---|---|---|
| Carpenito (1983) | Knowledge deficit of preoperative and postoperative regimen | Discuss details of preoperative and postoperative experiences, i.e. physical pre, meds, etc. |
| | Knowledge deficit related to diagnostic tests | Explain the bone and liver scan procedures |
| | Fear of uncertain future | Provide information concerning post-operative results and recovery |
| | Lack of knowledge of preoperative skin prep. | Teach patient how and when to wash operative area with betadine |
| | Lack of knowledge about breathing exercises to use to cope with pain | Teach patient abdominal breathing to practice during muscle spasms |
| | Lack of knowledge about preventing constipation | Teach patient the relationship of activity, high fiber diet, and bowel elimination |
| | Lack of knowledge about how to care for daughter at home | Discuss and teach cast care, hygiene, nutrition, elimination, diversional activities, tutoring, relief period for parents from care of daughter |
| LaMonica (1979) | Lack of knowledge of proper use of Bennett machine | Teach patient the correct way to use Bennett machine |
| | Lack of information | Provide patient with information |
| | Lack of understanding about treatment | Explain rationale for care |
| | Unfamiliar environment | Familiarize client with the unit and equipment |
| | Lack of understanding about diabetic diet | Explain and teach the client about diabetic diet |
| | Lack of knowledge about self-care | Teach client how to do own self-care |

(table continues)

| Source | Etiology | Nursing interventions |
|---|---|---|
| | Lack of knowledge regarding isometric exercises | Give patient instruction and demonstration of isometric exercises |
| | Lack of knowledge about measures to increase intra-abdominal pressure | Instruct patient to place hands on abdomen and lean forward from hips to increase intra-abdominal pressure |
| | Lack of knowledge about isometric exercises | Teach patient abdominal isometric exercise |
| Griffith & Christensen (1982) | Lack of knowledge about the harmful effects of cigarette smoking | Teach client about the effects of smoking |
| | Inadequate knowledge of rotating insulin injection sites | Teach the family about rotating insulin injection sites |
| | Lack of knowledge about preoperative and postoperative care | Teach client about preoperative and post-operative care |
| | Lack of knowledge about preventing postoperative complications | Teach client about preventive measures for possible postoperative complications |
| | Lack of knowledge about measures to prevent constipation postoperatively | Teach client about measures to prevent post-operative constipation |
| | Lack of knowledge about preventing possible postoperative complications | Teach client about preventing postoperative complications |
| | Lack of regular use of tension-release exercises | Help client plan a schedule for doing tension-release exercises |
| | Lack of knowledge about the significance of sodium intake and hypertension | Teach the client about the significance of sodium and hypertension |
| | Lack of knowledge about low sodium diet | Teach the client about low sodium diet |
| | Lack of knowledge about planning therapeutic diet | Teach the client to plan a therapeutic diet |

(table continues)

| Source | Etiology | Nursing intervention |
|---|---|---|
| Yura & Walsh (1982) | Lack of information | Provide simple explanations and continue to familiarize client with procedures, unit and equipment |
| | Lack of information | Provide information and explanations |
| | Lack of understanding about preventative health measures | Instruct client about the effects of smoking |
| Bower (1982) | Lack of knowledge about the need to cough postoperatively | Teach client about the importance of coughing postoperatively |
| Mayers (1983) | Lack of understanding about how to plug tracheostomy | Teach client how to plug tracheostomy |
| | Inability to communicate needs well | Develop an alternative way for client to communicate |
| | Lack of knowledge about procedure | Teach client about treatment procedure |
| | Lack of planning | Help client clarify concerns and problem solve |
| | Unfamiliar procedures | Explain any new procedures to client |
| | Strange environment | Familiarize client with environment |

## Research Objective 5

The fifth research objective was to organize the data summarized in Table 3 and Table 7 into categories of nurse's role-source of client difficulty sets and subcategories of etiology-intervention sets. Four major categories were formulated and defined by the investigator in order to group similar nurse's role-source of client difficulty sets together. The four major categories were environment, psychologic, social, and physiologic categories. All 70 (100%) etiology-intervention sets were classified into one of the four major categories. Table 9 summarizes the results of the classification of the etiology-intervention sets according to category, frequency and percentage. Thirty-six (51%) etiology-intervention sets were assigned to the cognitive psychologic category. This was the largest number of etiology-intervention sets assigned to any one category. The next greatest number of etiology-intervention sets assigned to a category was in the physiologic category which had 15 (21%) etiology-intervention sets. Table 10 summarizes the results of the classification of related nurse's role-source of client difficulty sets and etiology-intervention sets.

The nurse's role-source of client difficulty sets inferred from Henderson (1966), Johnson (1980), Nightingale

Table 9

Frequency and Percentage of Assigned Categories of Etiology-Intervention Sets

| Assigned category | Frequency | Percentage |
|---|---|---|
| I. Environment | 6 | 9% |
| II. Psychologic | | |
| Cognitive | 36 | 51% |
| Perceptual | 7 | 10% |
| III. Social | | |
| Intimacy | 4 | 6% |
| Cultural | 2 | 3% |
| IV. Physiologic | 15 | 21% |
| Totals | 70 | 100% |

Table 10

Categorization of Nurse's Role-Source of Client Difficulty, and Etiology-Intervention Sets

I. Environmental Categories

| Model | Source of client difficulty | Nurse's role | Etiology-intervention sets |
|---|---|---|---|
| Nightingale (1969) | Environmental interference with health or healing | Management or manipulation of environment | 1. Unfamiliar surroundings--Institute reality orientation by introducing familiar objects from home |
| Orlando (1961) | | Change the patient's environment | 2. Potential safety hazards in the home--Help client take corrective measures (nonslip tub surface, remove throw rugs, post emergency phone numbers by phone |
| Johnson (1980) | Noxious influences; lack of adequate environmental input | Alter the environment | 3. Potential safety hazards in home--Help client take corrective measures |
| Henderson (1966) | | | |
| Orem (1980) | | Provide an environment which promotes personal growth | 4. Potential for injury--Decrease the potential for injury in the room and ensure precautions are taken to minimize safety risks, i.e. use good light, use of glasses when ambulating |
| | | | 5. Sensory deprivation--Promote and maintain sensory stimulation |
| | | | 6. Lack of diversional activities--Determine appropriate diversional activities for client and encourage client to do a variety of them. |

(table continues)

II. Psychological Categories

A. Cognitive

| Model | Source of client difficulty | Nurse's role | Etiology-intervention sets |
|---|---|---|---|
| Johnson (1980) | | Teaching | 1. Knowledge deficit related to diagnostic tests--Explain the bone and liver scan procedures |
| Orem (1980) | | Teach | 2. Lack of knowledge or proper use of Bennett machine--Teach the patient the correct way to use the Bennett machine |
| Orlando (1961) | | Teach | 3. Lack of understanding about treatment--Explain rationale for all care |
| Peplau (1952) | | Teacher | 4. Lack of knowledge about preventing postoperative complications--Teach client about preventative measures for possible postoperative complications |
| Henderson (1966) | Lack of knowledge | Teaching | 5. Lack of information--Provide information and explanations |
| B. Perceptual | | | |
| Levine (1967) | Threats to personal integrity, i.e. fear, guilt, loneliness, anxiety | Conserve personal integrity | 1. Lack of support--support clients |
| Henderson (1966) | | Supply the help needed so client can communicate with others expressing emotions | 2. Difficulty coping with altered self-concept--Help client identify and utilize possible ways to cope with altered self-concept |

(table continues)

| Model | Source of client difficulty | Nurse's role | Etiology-intervention sets |
|---|---|---|---|
| Peplau (1952) | Anxiety; conflict of goals | Counselor | 3. High level of anxiety--Avoid overwhelming client with long detailed instructions, maintain a calm manner<br><br>4. Low level of anxiety--Generate a mild state of anxiety by reminding client he will have to assume responsibility for his medication when he is discharged |
| Orem (1980) | | Supporting another, i.e. avoidance of failure or difficult situations | 5. Lack of trust of staff--Have one nurse per shift care for client and set up specific ways of performing client's care<br><br>6. Lack of privacy--Provide privacy while client is using commode<br><br>7. Inability to differentiate increased incoming stimuli--Reduce unfamiliar incoming stimuli by slowly explaining procedures and activities |
| III. Social Categories | | | |
| A. Intimacy | | | |
| Neuman (1982) | Interpersonal stressors | Help the individual respond appropriately of strengthen individual's defense | 1. Concern that husband is unable to manage household alone--Help client and husband determine options for maintaining the household while client is hospitalized |

(table continues)

| Model | Source of client difficulty | Nurse's role | Etiology-intervention sets |
|---|---|---|---|
| Peplau (1952) | | Surrogate | 2. Maternal overprotection--Explore the client's feelings about her child doing things for herself and help her to devise a plan requiring the child to assume increasing responsibility for herself |
| Levine (1967) | Social isolation | Conserve social integrity | 3. Potential difficulty coping with inability to perform family role as usual--Explore alternative ways client can continue her "mothering" role<br><br>4. Lack of plans to participate in care of hospitalized premature infant--Help client devise plans to participate in care of hospitalized premature infant |
| B. Cultural | | | |
| Henderson (1966) | | Supply the help needed for client to work in a way there is a sense of accomplishment; worship according to one's faith; play or recreate | 1. Lack of planning alternative ways to perform role--Help client plan ways to fulfill her role<br><br>2. Lack of visitors--Introduce patient to other patients on unit; Enlist parents support to set up a rotating visiting schedule; Spend more time with patient on days when visitors cannot come |
| Levine (1967) | Social deprivation or isolation | Conserve social integrity | |
| Roy (1976) | Role distance, role conflict and role failure | | |

(table continues)

| Model | Source of client difficulty | Nurse's role | Etiology-intervention sets |
|---|---|---|---|
| IV. Physiological category | | | |
| Johnson (1980) | Ineffective or absent internal regulatory mechanisms | Impose control mechanisms | 1. Potential for decubitus ulcers on back and heels--Thoroughly rinse soap from skin after bath; Massage skin over bony prominences; Protect heels under traction boot with protective skin barrier |
| Henderson (1966) | | Supply help necessary to breathe, eat and drink adequately, eliminate body wastes, move and maintain desirable positions, sleep and rest, maintain body temperature within normal range, protect integument | 2. Potential for impaired circulation--Remind patient to wiggle toes at least 10 times each hour |
| Levine (1967) | Acute or chronic disease, structural or functional changes | Promote conservation of energy and structural integrity | 3. Potential impairment of skin integrity--Help client maintain comfortable position and good alignment; Use floatation pad; Do active and passive range of motion exercises; Turn every 1-2 hours; Give skin care after turning |
| Orem (1980) | Disease,injury, disability, disfigurement, and medical care measures | | |
| Roy (1976) | Need deficit or excess of nutritial problems, elimination, fluid and electrolytes, oxygen, circulation and regulation, immobility, fatigue and insomnia | | 4. Immobility--Turn client every 2 hours during the day and every 3 hours at night; Keep a sheepskin in contact with skin<br><br>5. Immobility--Do range of motion of all joints BID<br><br>6. Decreased capacity for activity--Limit client's activity to tolerable limit; Allow client to rest as needed |

(table continues)

| Model | Source of client difficulty | Nurse's role | Etiology-intervention sets |
|---|---|---|---|
| | | | 7. Potential for inadequate rest--Structure care to allow client to rest undisturbed |
| | | | 8. Dry nares--Cleanse nares with warm water and soap BID; Apply lubricant cream to nares every 2 hours |
| | | | 9. Frequent bathing--Decrease total body bathing to twice weekly and wash specific body areas daily |
| | | | 10. Potential for developing constipation--Record intake and output and check for bowel elimination every day |
| | | | 11. Alteration in bowel elimination--Do PRN digital exam to determine presence of hardened stool and fecal impaction if there has been no bowel movement |
| | | | 12. Colostomy leakage--Take measures to prevent colostomy from leaking |
| | | | 13. Colostomy leakage--Take measures to prevent colostomy from leaking |
| | | | 14. Inability to communicate treatment preference--Communicate the client's decision regarding treatment |
| | | | 15. Dependency on health care personnel for assitance with activities of daily living--Promote client's independence by having client plan and execute as much of the care as possible. |

(1859/1980), Orem (1980), Orlando (1961), Peplau (1952), and Roy (1976) were classified into one or more of the four major categories. The nurse's role-source of client difficulty sets inferred from King (1981), Riehl (1980), and Rogers (1970) were not classified into any category. The nurse's roles and sources of client difficulty from Rogers' (1970) and Riehl's (1980) models were abstract and inferences of the nurse's role and source of client difficulty did not correspond with the other models. The source of client difficulty inferred from King (1981) did not correspond with any category.

There were several problems encountered by the investigator when attempting to collapse similar nurse's role-source of client difficulty sets. The nursing models did not appear to identify a specific nurse's role which corresponded with each source of client difficulty. Additionally, the source of client difficulty and nurse's role of the models varied in level of specificity and were addressed in a general, nonspecific manner. Most nursing models had either the source of client difficulty or the nurse's role which corresponded to one of the four major categories in Table 10. Because the nursing models did not always appear to have a specific corresponding nurse's role for each source of client difficulty, the entire nurse's

role-source of client difficulty set in Table 3 was not always utilized in Table 10.

Table 10 contains three columns in each of the categories. The column labeled "model" includes the names of the nursing models having a source of client difficulty and/or nurse's role which corresponded with the particular category. The column labeled "source of client difficulty-nurse's role set" contains the inferred source of client difficulty and/or nurse's role which corresponds to the major category. The column labeled "etiology-intervention set" includes the etiology-intervention sets inferred from nursing process literature which corresponds with the source of client difficulty and/or nurse's role of the category.

Two of the four major categories were divided into two subcategories. The environment category and the physiologic category were not subdivided. The psychologic category consists of the cognitive and perceptual subcategories. The social category consists of the intimacy subcategory and the cultural subcategory. These subcategories further delineate the major categories. Each of the categories is discussed separately.

Environment

The environment category refers to actual objects, entities, or conditions external to the client which may interfere with the client's health or healing process. The most obvious nursing model which supported this category was Nightingale (1859/1980). The source of client difficulty according to Nightingale was environmental interference with healing or health and the nurse's role was manipulation or management of the environment. Johnson (1980) noted that noxious influences and lack of adequate environmental input could be a source of client difficulty, although there was not a nurse's role specifically mentioned which appeared to correspond to these sources of client difficulty. Both Orlando (1961) and Henderson (1966) suggested that altering the environment was a possible nurse's role. Orem (1980) suggested a nurse's role was to promote an environment which supported or favored personal growth. Four etiology-intervention sets corresponded with either the nurse's role and/or the source of client difficulty of Nightingale's (1859/1980), Johnson's (1980), Orlando's (1961), or Henderson's (1966) model. One etiology-intervention set pertained to unfamiliar environment. The intervention was to institute reality orientation by putting familiar objects from the

patient's home in the environment. In essence, the nurse changes the environment. Three etiology-intervention sets dealt with minimizing potential safety hazards in the environment. Two etiology-intervention sets corresponded with the sources of client difficulty or nurse's roles mentioned by Johnson (1980) or Orem (1980). Etiologies of these sets were sensory deprivation and lack of diversional activities. Both etiologies seemed to correspond with either inadequate environmental input or inadequate system stimulation, and the etiology-intervention sets were, therefore, matched as corresponding subcategories.

Psychologic

The psychologic category is composed of the cognitive and perceptual subcategories. The cognitive category refers to information processing and learning. Henderson (1966) specified lack of knowledge as a source of client difficulty and teaching as a nurse's role. Teaching was also indicated as a nurse's role by Johnson (1980), Orem (1980), Orlando (1961), and Peplau (1952). Thirty-six etiology-intervention sets reflected a lack of knowledge or understanding etiology, and the nursing interventions involved teaching or providing explanations. Because the etiologies and interventions of these 36 etiology-intervention sets were similar, not all of the 36

etiology-intervention sets were included in Table 10. Five etiology-intervention sets were included in Table 10 and are representative of the remaining 31 lack of knowledge-teaching etiology-intervention sets. This was the largest number of etiology-intervention sets which corresponded to the actor's role or source of difficulty categories.

The second psychologic category is the perceptual category which pertains to recognizable impressions or sensations received by the mind through one or more senses. Emotions per se do not represent actual sources of client difficulty but actually appear to be responses rather than etiologies. However, several nursing models included emotions as sources of client difficulty which nursing would or could treat. Levine (1967) included guilt, fear, loneliness, and anxiety as treats to personal integrity. Peplau (1952) contended that anxiety was a source of difficulty. Several nurse's roles were identified by Peplau (1952); however, the counselor role appeared to correspond with these sources of client difficulty. Levine (1967) provided several general guidelines for the conservation of personal integrity and these included accepting and supporting the patient. Orem (1980) suggested that providing support involved helping patients avoid difficult situations or failure. Henderson (1966)

mentioned a variety of nurse's roles and included that the nurse's role was to supply the help needed so the client could express his or her emotions with others. The perceptual subcategory was developed because the literature indicated that nurses treat and deal with the emotions of clients.

Seven etiology-intervention sets corresponded to the perceptual subcategory. The etiologies of these etiology-intervention sets included lack of support, difficulty coping with altered self-concept, high level anxiety, low level anxiety, lack of trust, lack of privacy, and inability to differentiate increased incoming stimuli. Lack of privacy is included in this subcategory because Levine (1967) specified that nursing interventions should deal with the rights and privileges of the individual if personal integrity was to be conserved. Assurance of privacy was specifically identified by Levine (1967). The other etiologies of inability to differentiate increased incoming stimuli, lack of support, altered self-concept, anxiety, and lack of trust are the result of the client's perceptions and considered appropriate for the perceptual subcategory. Nursing interventions directed at the client's anxiety level correspond with Peplau's (1952) model of nursing in that the interventions are aimed at the

client's anxiety level. These interventions also correspond with Orem's (1980) model and were considered a way of helping the client deal with a difficult situation. Levine (1967) stated that "self-identity and self-respect are foundations of personal integrity" (p. 54). Helping the client cope with altered self-concept was consistent with Levine's (1967) conservation of personal integrity. The intervention directed toward the client's lack of trust was also considered to be consistent with the conservation of personal integrity. Levine indicated a variety of emotions which could result as clients deal with medical routines and treatments. Lack of trust was considered, therefore, to be an emotion which resulted from the client's perception of his care.

The etiology-intervention set which involved supporting the client corresponded with Orem's (1980) nursing role of supporting another. This etiology-interventions set is vague. However, support is often mentioned in nursing literature as a nursing role or intervention.

Social

The social category was divided into the intimacy and cultural subcategories. The social intimacy category pertained to primary relationships between individuals such

as husband and wife, parent and child, and so on. Neuman (1982), Levine (1967) Peplau (1952) suggested nurses' roles and/or sources of client difficulty which corresponded to the social intimacy subcategory. Neuman (1982) suggested interpersonal stressors as a source of client difficulty, and the nurse's role involved helping the individual respond appropriately or strengthening the individual's defenses. Levine (1967) indicated social isolation as a source of client difficulty and the nurse's role was to conserve integrity. The conservation of social integrity included a variety of general actions. Peplau (1952) included the surrogate role as a nurse's role. The surrogate role is associated with this category because surrogate is often associated with primary relationships such as "surrogate mother." This, however, was an arbitrary decision, as surrogate could be applied to secondary relationships.

Four etiology-intervention sets were matched to the nurse's role and/or source of client difficulty included in the social intimacy subcategory. The etiology-intervention sets involve the mother-child relationship. The other etiology-intervention set involves a husband and wife relationship. The nursing interventions in all four etiology-intervention sets in the social intimacy

subcategory are aimed at helping the client(s) make appropriate plans.

Henderson (1966), Levine (1967), and Roy (1976) have nurses' roles and/or sources of client difficulty which correspond to the cultural subcategory. The nurse's role described by Henderson (1966) included supplying the help necessary for a client to work with a sense of accomplishment, worship according to one's faith, and participate in various forms of recreation. Working, worshipping and recreation are viewed as community or societal activities. Levine (1967 pointed out social deprivation or isolation as a source of client difficulty. The nurse's role according to Levine was to conserve social integrity since a patient's social integrity may be compromised by hospital visiting restriction, exclusion of family members from the patient's care, and how religious needs of the patient are handled by health care personnel. Roy (1976) contended that role distance, role conflict, and role failure are sources of client difficulty. These are included in the cultural category because the role function of an individual is related to his position within society and not confined to primary relationships.

Two etiology-intervention sets correspond to the cultural subcategory. The etiology involving lack of

visitors is considered a lack of socialization as discussed by Levine (1967). The intervention for this etiology involves conserving the patient's social integrity by encouraging the patient to socialize with other patients and to schedule a rotating visitor schedule. The other etiology-intervention set corresponds to the cultural subcategory since it involves role performance. This etiology and intervention set corresponds to role function which Roy (1976) described; however, the role was vague and was not described as pertaining to a primary relationship.

Physiologic

The fourth category is the physiologic category and pertains to the integrity of physiologic systems. Five nursing models have sources of client difficulty and/or nurses' roles which correspond to this category as noted in Table 10.

Fifteen etiology-intervention sets are matched with the physiologic category. Five etiology-intervention sets pertain to immobility, and the interventions include a range of nursing activities aimed at preventing possible outcomes associated with immobility. Two etiology-intervention sets involve rest and activity levels of the client. The nursing interventions for these etiology

intervention sets limit the client's activity level. Two etiology-intervention sets have etiologies associated with the integument, and these include "dry nares" and "frequent bathing." Four etiology-intervention sets pertain to the elimination of body wastes. One etiology-intervention set involves the client's ability to communicate, and the intervention is to communicate the client's treatment preference. This etiolgoy-intervention set has been included in the physiologic category because the nurse performs the function which the client cannot do himself. The etiology of dependency is included in this category and the intervention for dependency is to have the client do as much of his own care as possible. The nurse would subsequently perform the care that the client would be unable to do.

In summary, research objective 5 was to organize the nurse's role-source of client difficulty sets into categories with corresponding subcategories of etiology-intervention sets. Four categories were developed by the investigator, and these are the environment, psychologic, social, and physiologic categories. All 70 etiology-intervention sets corresponded with one of the four categories. Consequently, these etiology-intervention sets were matched as corresponding subcategories to

similar nurses' roles or sources of client difficulty which also corresponded to the particular category.

## Research Objective 6

Research objective 6 involved formulating the taxonomy of etiology-specific independent nursing interventions related to direct patient care by utilizing the data in Table 6. Essentially, formulating the taxonomy from Table 10 involved defining the nurse's role and source of client difficulty for the four major categories and combining the similar etiologies and nursing interventions. Table 11 contains these definitions and also contains more specific etiologies and nursing interventions for each major category.

Table 11 includes four major categories which are the environment, psychologic, social, and physiologic categories. The psychologic, and social categories each contain two subcategories. The psychologic category includes the cognitive and perceptual subcategories. The social category includes the social intimacy and cultural subcategories. The environment and physiologic categories are not divided further. There are five columns associated with each of the categories. The column labeled nursing model contains the name and year of the nursing models utilized to define the nurse's

Table 11

Summary of the Taxonomy of Etiology Specific Independent Nursing Interventions

Related to Direct Patient Care

I. Environment--Actual objects, entities or conditions external to the individual which may change the client's health for the worse or interfere with the healing process.

| Nursing model derivation | Source of client difficulty | Nurse's role | Etiology | Intervention |
|---|---|---|---|---|
| Henderson (1966) | Environmental interference with health or healing | Manipulation or management of the environment | 1. Safety hazards in environment or unsafe environment | 1. Physically remove the hazardous object from the environment or correct the hazard by altering or changing the object or condition. Includes use of adequate light, post emergency phone numbers, apply nonskid surface to bathtub |
| | | | 2. Unfamiliar environment | 2. Institute reality orientation by putting familiar objects from the client's home in the environment. For example, could bring family photographs from home and put in the client's room. |
| | | | 3. Sensory deprivation | 1. Promote and maintain sensory stimulation using sounds, sights or objects, touch, tastes, and/or odors. Examples: play a radio, talk with patient, touch patient, provide favorite food. |
| | | | 4. Lack of diversional activities | 2. Make a list of activities which are appropriate for client's activity level, age, and ability, and ask client to do one or more of these activities. List could include reading, watching television, drawing, or playing cards. |

(table continues)

II. Psychologic Categories

A. Cognitive--Mental process of knowing, learning or processing information.

| Nursing model derivation | Source of client difficulty | Nurse's role | Etiology | Intervention |
|---|---|---|---|---|
| Henderson (1966)<br>Johnson (1980)<br>Orem (1980)<br>Orlando (1961)<br>Peplau (1952) | Lack of knowledge or understanding | Teach, explain, instruct | 1. Lack of knowledge or understanding | 1. To show or help the client learn or understand by providing verbal or written explanations or physical demonstration which will result in a new or different skill or behavior regarding health care which the client may or may not choose to utilize. The client will be able to recite learned explanations or actually perform newly learned skill or behavior. Example: Explain and demonstrate dressing change. Client is then able to perform dressing change properly. |

B. Perceptual--Recognizable impressions or sensations received by the mind through one or more senses.

| | | | | |
|---|---|---|---|---|
| Henderson (1966)<br>Levine (1967)<br>Peplau (1952)<br>Orem (1980) | Threats to personal integrity--fear, guilt, anxiety, lonliness | Help client avoid or cope with difficult situations or failure | 1. Lack of support<br>2. Difficulty coping with altered self-concept<br>3. High level of anxiety<br>4. Low level of anxiety<br>5. Lack of trust of staff<br>6. Lack of privacy<br>7. Inability to differentiate increased incoming stimuli | 1. Support client by providing reassurance, encouragement or consoling<br>2. Help client identify and utilize possible ways to cope with altered self-concept<br>3. Avoid overwhelming client with long detailed instructions. Provide brief explanations using a calm manner<br>4. Generate a mild state of anxiety by reminding client he will assume responsibility for medication when he is discharged<br>5. Promote client's trust of staff by having one nurse per shift care for client and set up consistent |

(table continues)

| Nursing model derivation | Source of client difficulty | Nurse's role | Etiology | Intervention |
|---|---|---|---|---|
| | | | | specific ways of performing client's care so all nurses caring for client utilize similar techniques<br><br>6. Provide privacy when client is using commode by positioning privacy curtain around client and leave the room<br><br>7. Reduce unfamiliar incoming stimuli by slowly explaining procedures and activities |
| III. Social Categories | | | | |
| A. Intimacy--Pertains to primary relationships between individuals, i.e. husband and wife, mother and child, etc. | | | | |
| Levine (1967) | Social isolation, interpersonal stressors | Help individual(s) respond appropriately or strengthen the individual's defenses | 1. Concern that husband is unable to manage household alone | 1. Help client and husband determine options for maintaining household while client is hospitalized such as hiring a temporary housekeeper or having neighbors cook meals |
| Neuman (1982) | | | 2. Maternal overprotection | 2. Talk with client about her feelings concerning her child doing things for herself and help her devise a plan requiring the child to assume increasing responsibility for herself, i.e. help devise plan for child to learn how to dress herself |
| | | | 3. Potential difficulty with inability to perform family role as usual | 3. Discuss with client how she can continue her "mothering" role while in the hospital |

(table continues)

| Nursing model derivation | Source of client difficulty | Nurse's role | Etiology | Intervention |
|---|---|---|---|---|
| Peplau (1952) | | | 4. Lack of plans to participate in care of hospitalized premature infants | 4. Help client devise plans to participate in care of hospitalized infant. May include arranging transportation for mother to the hospital to feed infant, talking with nursery staff about mother feeding infant |
| B. Cultural--Pertaining to social norms and roles, secondary relationships | | | | |
| Levine (1967) | Social isolation or deprivation, role distance, role conflict, role failure | Conserve social integrity, supply the help necessary for client to work with a sense of accomplishment, worship according to their faith, and play or recreate | 1. Lack of planning alternative ways to perform role<br>2. Lack of visitors | 1. Help client list alternative ways to perform her role<br>2. Get client's parents to set up a rotating visiting schedule of peers; introduce patient to other patients on unit, and spend more time with client on days when visitors cannot come to visit |
| IV. Physiological Category--Pertains to the integrity of the physiological system(s) | | | | |
| Henderson (1966)<br>Johnson (1980)<br>Levine (1967) | Ineffective or absent internal regulatory mechanisms, acute or chronic disease, structural or functional changes, medical care measures | Impose control mechanisms, supply the help needed to cope with, change, or alleviate a stressor affecting a physiological system(s) or functioning | 1. Immobility<br>2. Decreased capacity for activity | 1. Use of one or more of the following: (a) Thoroughly rinse soap from skin after bath; (b) massage skin over bony prominences; (c) Use of heel protectors; (d) Active and passive range of motion exercises; (e) Use of floatation pad; (f) Use of regular repositioning and turning; (g) Use of a sheepskin in contact with patient's skin<br>2. Limit patient's activity to tolerable limit and allow patient to rest as needed |

(table continues)

| Nursing model derivation | Source of client difficulty | Nurse's role | Etiology | Intervention |
|---|---|---|---|---|
| Orem (1980) | | | 3. Potential for adequate rest | 3. Structure client's care to allow client to rest undisturbed |
| Orlando (1961) | | | 4. Dry skin | 4. Reduce total body bathing to twice weekly and wash specific body areas daily. Apply lubricant cream to dry skin |
| | | | 5. Potential for developing constipation | 5. Check for bowel elimination daily; Record intake and output; Do PRN digital exam to determine presence of fecal impaction or hardened stool if no bowel movement |
| | | | 6. Colostomy leakage | 6. Take measures to prevent colostomy from leaking--reinforce seal with generous amounts of Karaya jel; Fasten dressing with montgomery straps; Reinforce dressing with surgical pads |
| | | | 7. Inability to communicate treatment preference | 7. Communicate the client's decision regarding treatment |
| | | | 8. Dependent on health care personnel for assistance with activities of daily living | 8. Promote client's independence by having client plan and execute as much of own care as possible |

role and/or source of client difficulty for the respective category. The column labeled nurse's role contains the actor's role(s) for each category and the column labeled source of client difficulty contains the source(s) of client difficulty for each category. The column labeled etiology and intervention contain etiologies and nursing interventions which correspond to the nurse's role and source of client difficulty in each category and were inferred from case studies in nursing process literature.

The theoretical definitions for the nurse's role and source of client difficulty in the taxonomy were derived by one of two methods. The definitions of nurse's role or source of client difficulty in Table 10 were combined to formulate the definition of the nurse's role or source of client difficulty in the taxonomy. The second method of deriving the nurse's role or source of client difficulty in the taxonomy was to redefine the nurse's role or source of client difficulty based on the definitions in Table 10. Redefining the nurse's role or source of client difficulty was necessary when the definitions in Table 10 varied in level of specificity. The resulting definitions in the taxonomy, however, are designed to be general and broad in scope. The

nurse's role for the social intimacy subcategory and the physiological category were redefined and changed from the definitions included in Table 10. The sources of client difficulty for the perceptual subcategory, and physiological category were likewise redefined.

Similar etiologies and interventions in Table 10 were combined to reflect specific etiologies and corresponding interventions which are related to the nurse's role and source of client difficulty in each category of the taxonomy. Etiologies and interventions included in Table 10 which could not be combined with similar etiologies and interventions were used to formulate a new etiology and corresponding intervention.

There were problems encountered by the investigator regarding the etiologies and interventions in the categories of the taxonomy. First the reliability and validity of the etiology and corresponding intervention categories are not known. It was expected that the etiologies and interventions named in case studies in nursing process literature would correspond and be specific. This was not always the case. Additionally, the level of specificity of the interventions and etiologies varied and many were broad and general. The lack of specificity prevented the investigator from operationally defining

the interventions in the taxonomy. Operational definitions of several nursing interventions were formulated. Otherwise the nursing interventions were described as clearly as possible.

The most specific etiologies and interventions included in Table 11 are in the environment category, the psychologic cognitive, and the physiologic category. The nursing interventions in the social intimacy and cultural subcategories and in the psychological perceptual subcategory contain a variety of interventions which appear to be aimed at helping clients plan or cope with the particular etiology. Each of the major categories in Table 11 are briefly discussed.

Environment

The source of client difficulty for the environment category is environmental interference with health or healing. The nurse's role is manipulation or management of the environment. There are four etiologies in the environment category. The first etiology is an unsafe environment or safety hazards in the environment. The corresponding nursing intervention for this etiology is to physically remove the hazardous object from the environment or correct the hazard by altering the object or condition. The second etiology in the environment

category is unfamiliar environment. Nursing actions for this etiology were to institute reality orientation. The third etiology is sensory deprivation, and the corresponding intervention is to promote and maintain sensory stimulation. Nursing interventions for lack of diversional activities, the fourth etiology, include making a list of possible appropriate activities for the patient and offering or suggesting the patient do one or more of these activities. The nursing interventions in the environment category were among the most specific interventions included in Table 11 and seemed to correspond with the nurse's role and sources of client difficulty in this category.

Psychologic

The source of client difficulty for the cognitive psychologic subcategory is lack of knowledge or understanding. The nurse's role is to teach, explain, or instruct. The cognitive category has one etiology-specific nursing intervention. The etiology for the cognitive category is lack of knowledge or understanding, and the corresponding intervention is to explain or teach. There were 36 etiology-intervention sets containing etiologies and interventions which corresponded with the cognitive

category. This was the largest number of etiology specific independent nursing interventions in any category.

The source of client difficulty for the perceptual subcategory is threats to personal integrity, and the nurse's role is to help the client cope with or avoid difficult situations or failure. Neither the source of client difficulty or the nurse's role was very specific. Also, the nurses' role and source of client difficulty for the perceptual subcategory did not seem to correspond. There were seven etiologies and corresponding nursing interventions in the perceptual subcategory. The etiologies reflect a variety of problems which have vague nursing interventions.

Social

The social category has two subcategories which include the intimacy and cultural subcategories. The source of client difficulty and the nurses' role for both these categories is not specific. The data in Table 10 did not support a specific source of client difficulty or nurses' role for the intimacy and cultural subcategories. Because a variety of etiologies and interventions corresponded with the intimacy category, the nurse's role and source of client difficulty had to be broad in scope. The type of relationship, namely

a primary relationship, was the determining characteristic for the etiologies included in the intimacy subcategory rather than specific types of etiologies. Again, a variety of etiologies is included in the intimacy subcategory. The corresponding nursing interventions reflect a variety of interventions which indicate that the nurse is helping the client(s) to cope or plan.

The source(s) of client difficulty for the social cultural subcategory are social isolation or deprivation, role distance, role conflict, or role failure. These are more specific than the sources of difficulty in the social intimacy subcategory, but, here again, the type of relationship is the defining factor for including etiologies and interventions in this subcategory. The nurse's role for the social cultural category is to conserve social integrity or supply the help necessary for a client to work, worship, or recreate. The nurse's role does not appear to correspond with the source of client difficulty.

There are two etiologies in the cultural subcategory which are "lack of planning alternative ways to perform role" and "lack of visitors." The etiologies are congruent with the source of client difficulty in the category.

The interventions correspond with the etiologies but vary in level of specificity.

Physiologic

The source of client difficulty for the physiologic category is stressors affecting the normal functioning of one or more physical systems or abilities. The nurse's role is to supply the help needed to cope with, change, or alleviate a stressor affecting physiologic systems or functioning. Eight etiologies and corresponding interventions are included in this category. The physiologic etiologies include immobility, inadequate rest and activity levels, dry skin, elimination, inability to communicate, and dependency. The nursing interventions for these etiologies are specific and involve "hands-on" care. These interventions were among the most specific interventions in Table 11.

The taxonomy of etiology-specific independent nursing interventions related to direct patient care resulted from changing the format of data presented in Table 11. The final taxonomy is presented in Table 12 and does not include the nursing model derivation column for each category. The taxonomy is presented in a more concise, useable format.

Table 12

The Taxonomy of Etiology-Specific Independent Nursing Interventions Related to Direct Patient Care

I. Environment--Actual objects, entities, or conditions external to the patient which may change the client's health for the worse or interfere with health or healing.

| Source of client difficulty: | Nurse's role: |
|---|---|
| Environmental interference with health or healing. | Manipulation or management of environment |

| Etiology statements | Interventions |
|---|---|
| 1. Safety hazards in environment or unsafe environment | 1. Physically remove the hazardous object from the environment or correct the hazard by altering or changing the object or condition. Includes use of adequate light, post emergency phone numbers, apply nonskid surface to bathtub |
| 2. Unfamiliar environment | 2. Institute reality orientation by putting familiar objects from the client's home in the environment. For example could bring family photographs from home and put in the client's room |
| 3. Sensory deprivation | 3. Promote and maintain sensory stimulation using sounds, sights or objects, touch, tastes, and/or odors. Examples--play a radio, talk with patient, touch patient, provide favorite food |
| 4. Lack of diversional activities | 4. Make a list of activities which are appropriate for client's activity level, age, and ability, and ask client to do one or more of these activities. List could include reading, watching television, drawing, or playing cards |

(table continues)

II. Psychologic

A. Cognitive--Mental process of knowing, learning, or processing information.

| Source of client difficulty: | Nurse's role: |
|---|---|
| Lack of knowledge or understanding | Teach, explain, instruct |

| Etiology statements | Interventions |
|---|---|
| 1. Lack of knowledge or understanding | 1. To show or help the client learn or understand by providing verbal or written explanations or instructions or physical demonstrations which will result in a new or different skill or behavior regarding health care which the client may or may not choose to utilize. The client will be able to recite learned explanations or actually perform newly learned skill or behavior. Example: Explain and demonstrate dressing change. Client is then able to perform dressing change properly. |

B. Perceptual--Recognizable impressions or sensations received by the mind through one or more senses.

| Source of client difficulty: | Nurse's role: |
|---|---|
| Threats to personal integrity--fear, guilt, anxiety, lonliness | Help client avoid or cope with difficult situations or failure |

| Etiology statements | Interventions |
|---|---|
| 1. Lack of support | 1. Support client by providing reassurance, encouragement or consoling. |
| 2. Difficulty coping with altered self-concept | 2. Help client identify and utilize possible ways to cope with altered self-concept. |
| 3. High level of anxiety | 3. Avoid overwhelming client with long detailed instructions. Provide brief explanations using a calm manner. |

(table continues)

| Etiology statements | Interventions |
|---|---|
| 4. Low level of anxiety | 4. Generate a mild state of anxiety by re-reminding client he will assume responsibility for medication when he is discharged. |
| 5. Lack of trust of staff | 5. Promote client's trust of staff by having one nurse per shift care for client and set up consistent specific ways of performing client's care so all nurses caring for client utilize similar techniques. |
| 6. Lack of privacy | 6. Provide privacy when client is using commode by positioning privacy curtain around client and leave the room. |
| 7. Inability to differentiate increased incoming stimuli | 7. Reduce unfamiliar incoming stimuli by slowly explaining procedures and activities. |

III. Social

A. Intimacy--Pertains to primary relationships between individuals, i.e. husband and wife, mother and child

| Source of client difficulty: | Nurse's role: |
|---|---|
| Social isolation, interpersonal stress | Help the individual(s) respond appropriately or strengthen the individual's defense |

| Etiology statements | Interventions |
|---|---|
| 1. Concern that husband is unable to manage household alone | 1. Help client and husband determine options for maintaining household while client is hospitalized such as hiring a temporary housekeeper or having neighbors cook meals. |
| 2. Maternal overprotection | 2. Talk with client about her feelings concerning her child doing things for herself and help her devise a plan requiring the child to assume increasing responsibility for herself, i.e. help devise plan for child to learn how to dress herself. |

(table continues)

| Etiology statements | Interventions |
|---|---|
| 3. Potential difficulty with inability to perform family role as usual | 3. Discuss with client how she can continue her "mothering" role while in the hospital. |
| 4. Lack of plans to participate in care of hospitalized premature infant | 4. Help client devise plans to participate in the care of hospitalized infant. May include arranging transportation for mother to the hospital to feed infant, talking with nursery staff about mother feeding infant. |
| IV. Social | |
| B. Cultural--Pertains to social norms and roles, secondary relationships | |
| Source of client difficulty: | Nurse's role: |
| Social isolation or deprivation, role distance, role conflict, role failure | Conserve social integrity, supply the help necessary for client(s) to work with a sense of accomplishment, worship according to their faith, and play or recreate |

| Etiology statements | Interventions |
|---|---|
| 1. Lack of planning alternative ways to perform role | 1. Help client list alternative ways to perform her role. |
| 2. Lack of visitors | 2. Get client's parents to set up a rotating visiting schedule of peers; introduce patient to other patients on unit, and spend more time with client on days when visitors cannot come to visit. |

(table continues)

V. Psysiologic--Pertains to the integrity of the physiological system(s)

| Source of client difficulty: | Nurse's role; |
|---|---|
| Ineffective or absent internal regulatory mechanisms, acute or chronic disease, structural or functional changes, medical care measures | Impose control mechanisms, supply the help needed to cope with, change, or alleviate a stressor affecting a physiological system(s) or functioning |

| Etiology statements | Interventions |
|---|---|
| 1. Immobility | 1. Use of one or more of the following: (a) Thoroughly rinse soap from skin after bath; (b) Massage skin over bony prominences; (c) Use of heel protectors; (d) Active and passive range of motion exercises; (e) Use of floatation pad; (f) Use of regular repositioning and turning; (g) Use of a sheepskin in contact with patient's skin. |
| 2. Decreased capacity for activity | 2. Limit patient's activity to tolerable limit and allow patient to rest as needed. |
| 3. Potential for inadequate rest | 3. Structure client's care to allow client to rest undisturbed. |
| 4. Dry skin | 4. Reduce total body bathing to twice weekly and wash specific body areas daily. Apply lubricant cream to dry skin. |
| 5. Potential for developing constipation | 5. Check for bowel elimination daily; Record intake and output; Do PRN digital exam to determine presence of fecal impaction or hardened stool if no bowel movement. |
| 6. Colostomy leakage | 6. Take measures to prevent colostomy from leaking--reinforce seal with generous amounts of Karaya jel; Fasten dressing with montgomery straps; Reinforce dressing with surgical pads. |

(table continues)

| Etiology statements | Interventions |
| --- | --- |
| 7. Inability to communicate treatment preference | 7. Communicate the client's treatment decision regarding treatment. |
| 8. Dependency on health care personnel for assistance with activities of daily living | 8. Promote client's independence by having client plan and execute as much of own care as possible. |

The taxonomy of etiology-specific independent nursing interventions contains four major dimensions which serve as categories. These dimensions are the environment, psychologic, social, and physiologic dimensions. The psychologic and social dimensions each contain two categories. The final taxonomy, therefore, contains four major dimensions which result in six category divisions of sources of client difficulty, nurse's roles, etiologies and nursing interventions. Not all of the categories have clearly defined sources of client difficulty or nurse's role. The psychologic perceptual, social intimacy, and social cultural categories contain a variety of etiologies and interventions. The environment, physiologic cognitive, and the physiologic categories contain more specific etiologies and independent nursing interventions. These categories include environmental management, teaching, and interventions involving direct "hands-on" care as independent nursing interventions.

## Summary of Findings

This chapter has discussed the analysis and treatment of data collected from 8 sources of nursing diagnosis, 12 sources of nursing models, and 10 sources of nursing process literature. Definitions of independent and interdependent nursing interventions were formulated

using data collected from nursing diagnosis literature. Independent nursing interventions are defined as related to treating the etiology of the nursing diagnosis and are planned, initiated by or performed by professional nurses without the supervision or guidance of another licensed health care professional. Independent nursing interventions are under the cognitive control of the professional nurse and are reflected in the nursing care plan. Interdependent nursing interventions are defined as activities delegated to the nurse as directed and legally sanctioned by medical verbal or written orders, standing medical or hospital/organizational protocols which require the supervision of another health care professional and include dispensing and administering medication, radiation and surgical interventions, and other delegated activities which are not within the legally defined practice of nursing. Interdependent nursing interventions do not require nursing diagnoses.

The inferred sources of client difficulty and nurses' roles from 12 nursing models were summarized. There were no independent nursing interventions and corresponding etiologies found in any of the nursing models. There were 108 etiology-intervention sets inferred from 8 sources of nursing process literature. There were 70

etiology-intervention sets containing etiologies and nursing interventions which were congruent with the definition of independent nursing intervention.

The investigator organized the nurse's role-source of client difficulty sets into categories with corresponding subcategories of etiology-intervention sets. The taxonomy of etiology-specific independent nursing interventions related to direct patient care was formulated. There are four major dimensions in the taxonomy which are the environment, psychologic, social, and physiologic categories. Not all potential etiology components of nursing diagnoses are represented in the etiology column of the taxonomy. The psychologic, and social categories were each divided into two subcategories. The environment category, the psychologic cognitive, as well as the physiologic category have the most specific independent nursing interventions and corresponding etiologies in that taxonomy. The etiologies in these categories which are amenable to independent nursing interventions are as follows: environmental hazards or interference with health, lack of knowledge, immobility, elimination of body wastes, activity and rest patterns, skin care, inability to communicate, and dependency. Independent interventions for these etiologies included management

of the environment, teaching, and "hands-on" care interventions. The social categories and psychologic perceptual category have a variety of etiologies and interventions which do not indicate clear specific etiologies and interventions. The interventions in these categories appear to be aimed at helping clients plan or cope with various etiologies.

# CHAPTER V

# SUMMARY OF THE STUDY

This chapter presents a summary of the study and a discussion of the findings. The conclusions and implications of the study are stated as well as recommendations for further study.

## Summary

The problem of this study was to develop a taxonomy of etiology-specific independent nursing interventions related to direct patient care and which was exhaustive and mutually exclusive. An exploratory, descriptive methodological research design was utilized and data were collected and analyzed in a systematic manner. The nonprobability convenience sample was comprised of 8 sources of nursing diagnosis literature, 10 sources of nursing process literature, and 12 nursing models.

Research objectives rather than research hypotheses were used to systematically collect and analyze data. Six research instruments were designed by the investigator to summarize data from nursing literature in order to (a) define independent and interdependent nursing interventions;(b) determine the nurse's role and source of

client difficulty in 12 nursing models; and (c) determine the independent nursing interventions and corresponding etiologies from case studies in nursing process literature.

Definitions for interdependent and independent nursing interventions were formulated by the investigator and are as follows. Independent nursing interventions are related to treating the etiology of the nursing diagnosis and are planned, initiated by, or performed by the professional nurse without the supervision or guidance of another licensed health care professional. Independent nursing interventions are under the cognitive control of the professional nurse and are reflected in the nursing care plan. Interdependent nursing interventions are defined as activities delegated to the nurse as directed and legally sanctioned by medical verbal or written orders, standing medical of hospital/organizational protocols which require the supervision of another health care professional and include dispensing and administering medication, radiation, or surgical interventions and other delegated activities which are not within the legally defined practice of nursing. Interdependent nursing interventions do not require a nursing diagnosis.

The sources of client difficulty from 12 nursing models were inferred and summarized. Seventy etiology

intervention sets having independent nursing interventions were inferred from case studies contained in nursing process literature. The taxonomy of etiology-specific independent nursing interventions related to direct patient care was formulated using the nurses' role-source of client difficulty sets and etiology-intervention sets.

Similar sources of client difficulty, nurses' roles, and specific etiologies and nursing interventions were grouped into one of the six categories in the taxonomy. The taxonomy of etiology-specific independent nursing interventions is a six category, two column table. The taxonomy has four major dimensions which include environment, psychologic, social, and physiologic dimensions. The social and psychologic dimensions were divided into two categories.

The source of client difficulty and nurses' role is defined in each category. Each category in the taxonomy has an etiology column and a nursing interventions column. The column labeled "etiology statements" contains specific etiologies which are related to the source of client difficulty. The column labeled "nursing interventions" contains descriptions of independent nursing interventions which are specific for the etiology and which are related to the nurse's role.

## Discussion of Findings

The impetus for this study was the difficulty experienced in using the Schema for Classification (Gartland, 1982) which was developed to measure the congruency of the etiology component of the nursing diagnosis and the corresponding nursing interventions. Human responses amenable to nursing interventions and general descriptions of the corresponding nursing interventions were reflected by the categories of the Schema for Classification (Gartland, 1982). The categories, however, were not exhaustive or mutually exclusive.

As the autonomous role of the professional nurse has emerged, various descriptions of nursing have resulted. Gartland's (1982) Schema for Classification not only provided direction regarding etiology-specific nursing interventions, but also provided a description of what etiologies nurses treat and the interventions which correspond to those etiologies. A partial description of nursing is reflected by Gartland's (1982) instrument. Other descriptions of nursing in the form of typologies or classifications have helped to further develop and describe the autonomous practice of nursing.

There are several differences between Gartland's (1982) Schema for Classification and the taxonomy of etiology-specific independent nursing interventions. The taxonomy was formulated by using nine nursing models and eight sources of nursing process literature. Gartland used three models to formulate the Schema for Classification. The use of a larger sample of nursing literature seems to have helped more clearly describe etiologies and corresponding independent nursing interventions. The taxonomy has more content validity than Gartland's instrument. However, not all nursing models and nursing process literature were reviewed for the taxonomy. Validity of the taxonomy for other nursing models can not be assumed.

A taxonomy of etiologies and independent nursing interventions seems to have potential as far as providing direction for practice and providing a description of nursing. The taxonomy of etiology-specific independent nursing interventions related to direct patient care does not provide a description of independent nursing practice. However, the taxonomy represents an initial attempt to identify etiology-specific independent nursing interventions. The idea of etiology-specific nursing interventions is rarely conveyed in the literature. If

nursing is to establish a scientifically developed practice, the notion of nursing diagnosis etiology-specific nursing interventions must be established.

The definitions of independent and interdependent nursing interventions were useful in classifying nursing interventions as independent or interdependent. Teaching appeared to be an important role of the nurse as evidenced by the number of nursing interventions in nursing process literature which involved teaching. Interventions involving managing the client's environment, teaching, and several "hands-on" interventions were among the most clearly described and numerous independent nursing interventions in the taxonomy. The definitions of independent and interdependent nursing interventions supported the idea of different aspects of nursing practice and that the use of a nursing diagnosis is not always appropriate. Independent nursing interventions are associated with nursing diagnoses, whereas interdependent nursing interventions are associated with the diagnoses of other health care professionals.

One source of nursing literature used for this study implied that medical diagnoses were appropriate nursing diagnoses (Aspinall & Tanner, 1981). However, nurses

cannot independently treat medical diagnoses, and medical diagnoses are not appropriate nursing diagnoses.

The literature used for this investigation also indicated that a variety of formats are used for nursing diagnosis. The variation of nursing diagnosis statements is reflective of the lack of criteria for writing a nursing diagnosis. Not only did the literature used for this study contain varying formats of writing nursing diagnosis, the nursing interventions were not always directed at the stated etiology. Nursing interventions were aimed at treating patient responses rather than the etiologies. Interventions which are nursing diagnosis etiology-specific would appear to change the patient's response by alleviating or modifying the actual problem or etiology causing the patient's response. Specific criteria to distinguish etiologies from patient responses would be helpful.

All of the etiologies and nursing interventions inferred from nursing process literature were assigned to one of the categories in the taxonomy. The categories, however, cannot be assumed as exhaustive and mutually exclusive because of the convenience sample and sample size. Further testing is required to substantiate if the categories are exhaustive and mutually exclusive. Further

testing would be necessary to develop categories which are more definitive and which would provide more direction for nursing interventions. The etiologies included in the taxonomy do not represent all possible etiologies amenable to nursing interventions. The specific nursing interventions of the taxonomy were not operationally defined but were described as clearly as possible.

Roy (1975) proposed that a taxonomy must adhere to rules of categorization. The taxonomy of etiology-specific independent nursing interventions is relevant to the purpose of the classification system, and the category sets are open. The taxonomy requires further testing to substantiate if the categories are useful. compatible with related systems, and capable of computerization. Further testing is also required to determine the interrater reliability of the categories in the taxonomy.

The need for nursing to develop its own unique body of knowledge has been stated in the literature. The taxonomy of etiology-specific independent nursing interventions contains four dimensions which may reflect the body of knowledge needed by professional nurses to plan and implement nursing care. Consequently, nursing may not have its own unique body of knowledge. However, the manner in

which professional nurses use this knowledge may be a distinguishing factor of nursing practice.

## Conclusions and Implications

Based upon the findings of the study, the following conclusions were made:

1. Content validity for the taxonomy can be claimed to the extent that the taxonomy reflects selected nursing literature regarding nursing diagnosis, nursing models, and nursing process. Validity for the taxonomy regarding other nursing models and literature cannot be assumed.

2. The body of knowledge needed by professional nurses may be reflected in the four dimensions of the taxonomy which are the environment, psychologic, social, and physiologic dimensions.

3. Teaching is an important role of the professional nurse.

4. The definitions of independent and interdependent nursing interventions differentiated nursing functions contained in nursing process literature as independent and interdependent.

5. The four dimensions of the taxonomy appeared to be collectively exhaustive.

Based upon the conclusions of the study, the implication is that further development of the taxonomy of

etiology-specific independent nursing interventions related to direct patient care is necessary before the taxonomy has implications for nursing practice and nursing education.

## Recommendations for Further Study

The following recommendations for further study were made:

1. Determine the interrater reliability of the major categories in the taxonomy.

2. Determine if the categories of the taxonomy are exhaustive and mutually exclusive.

3. Test the validity of the etiology-specific nursing interventions in the categories of the taxonomy.

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# APPENDICES

# APPENDIX A

## Schema for Classification of the Etiology Component of the Nursing Diagnosis Statement and Nursing Interventions

and

## Permission from Gartland to Use Instrument

Schema for Classification of the Etiology Component of the Nursing Diagnosis Statement and Nursing Interventions

| Category No. | Etiology | Derivation | Intervention |
|---|---|---|---|
| 1 | Lack of knowledge or understanding (cognitive) | Orem--teaching<br>Orlando--instruct, inform, explain<br>Peplau--teacher | Teach/instruct/explain, demonstrate/show/point out |
| 2 | Inability, lack of or decreased ability to perform tasks; e.g., immobility | Orem--acting/doing for, physically support<br>Orlando--handle patient's body | Assist/provide/perform/ any verb that indicates hands on care |
| 3 | Inability/lack of or decreased ability to make choices; pursue course of action | Orem--guide<br>Orlando--suggest/ direct/make decision for<br>Peplau--Counselor/ leader | Counsel/suggest/ role play/direct/ guide/identify/ advise/supervise |
| 4 | Inability/lack of or decreased ability to sustain in an effort | Orem--support psychologically | Support/allow encourage/maintain/ reinforce/reassure/ approve |
| 5 | Lacking necessary resources such as finances | Peplau--resource person/consultant | Refer/consult |

(table continued)

| Category No. | Etiology | Derivation | Intervention |
|---|---|---|---|
| 6 | Environmental deficit | Orem--provide developmental environment<br>Orlando--change environment<br>Peplau--safety agent | Manipulation environment/ ensure safety, health, and growth and developmental aspects of environment |
| 7 | Other: need for nurturance | Peplau--surrogate | Inherent "caring" component of nursing role. TLC |
| 8 | Other: etiology reflects medical diagnosis | Orlando--administer medications or treatments | Dependent role of nurse; e.g., start I.V. Give medication |
| 9 | Other: nature ambiguous | Ziegler--(unpublished manuscript, 1982) | "Shot-Gun" approach/ try everything/diffuse nursing actions |

September 1, 1985

Ms. Nancy Johnson, R.N.
2904 Creekview Circle
Grapevine, Texas 76051

Dear Nancy,

Congratulations on successfully defending your thesis proposal. I am delighted to grant you permission to include my Schema for Classification in completing your research.

Good luck with your final defense.

Sincerely,

Karen Freeman Gartland R.N. M.S.

Karen Freeman Gartland, R.N., M.S.

KF/brc

5621 Longview
Dallas, Texas 75206

# APPENDIX B

## Research Review Committee Exemption Form

TEXAS WOMAN'S UNIVERSITY
COLLEGE OF NURSING

PROSPECTUS FOR THESIS/DISSERTATION/PROFESSIONAL PAPER

This prospectus proposed by: Nancy Akins Johnson

_____ and entitled:

Taxonomy of Etiology-Specific Nursing Interventions:

Instrument Development

Has been read and approved by the member of (his/hers)

Research Committee.

This research is (check one):

___xx___ Is exempt from Human Subjects Review Committee

review because no human subjects will be used.

_____

_____

_____ Requires Human Subjects Review Committee review

because _____

_____

Research Committee:

Chairperson, Shirley M. Ziegler

Member, Rose M. Nesbitt

Member, Beth C. Vaughan-Wrobel

Date: July 17, 1985

Dallas Campus xx Denton Campus ___ Houston Campus ___

# APPENDIX C

## Letter of Approval from Graduate School

TWU
Texas Woman's University
P.O. Box 22479, Denton, Texas 76204 (817) 383-2302, Metro 434-1757
THE GRADUATE SCHOOL

February 2, 1984

Mrs. Nancy Akins Johnson
2004 Santa Fe. Trail
Grapevine, Texas 76051

Dear Mrs. Johnson:

I have received and approved the Prospectus for your research project. Best wishes to you in the research and writing of your project.

Sincerely yours,

Barbara J. Cramer

Barbara J. Cramer
Provost, ad interim

rh

cc Dr. Shirley Ziegler
Dr. Anne Gudmundsen

# APPENDIX D

## Instruments

INSTRUMENT 1

Differentiation of Nursing Diagnoses from Other Health Care Diagnoses Reflected by Nursing Diagnosis Literature

| Source | Definition of Nursing Diagnosis | Definition of Other Health Care Professional's Diagnosis |
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INSTRUMENT 2

Differentiation of Nursing Interventions Directed by Nursing Diagnoses and Nursing Interventions Directed by Other Health Care Professional's Diagnoses

| Source | Intervention Directed by Nursing Diagnosis | Interventions Directed by Diagnosis of Other Health Care Professionals |
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INSTRUMENT 3

Summary of Actor's Role and Source of Difficulty
Inferred from Nursing Models

| Nursing Model | Nurse's Role | Source of Client Difficulty |
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INSTRUMENT 4

Summary of Independent Nursing Interventions and Corresponding Etiologies Cited in Nursing Models

| Nursing Model | Nursing Intervention | Etiology |
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INSTRUMENT 5

Summary of Independent Nursing Interventions and Corresponding Etiologies Inferred from Nursing Process Literature

| Source | Nursing Intervention | Etiology |
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INSTRUMENT 6

Categorization of Nurse's Role-Source of Client Difficulty Sets and Etiology-Intervention Sets

| Nursing Model | Nurse's Role-Source of Client Difficulty | Etiology-Intervention |
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