NURSING PROCESS MODEL'S UTILITY IN ASSISTING ASSOCIATE DEGREE NURSING STUDENTS TO IDENTIFY THE INDEPENDENT DOMAIN OF NURSING

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To the Provost of the Graduate School:

I am submitting herewith a thesis written by

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entitled Nursing Process Model's Utility in Assisting Associate Degree Nursing Students to Identify the ~~Independent Domain of Nursing~~

I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Nursing.

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NURSING PROCESS MODEL'S UTILITY IN ASSISTING ASSOCIATE DEGREE NURSING STUDENTS TO IDENTIFY THE INDEPENDENT DOMAIN OF NURSING

ABSTRACT

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The associate degree nursing students' ability to identify the independent domain of nursing as determined by the etiology component of the nursing diagnosis statement was studied before and after they received instruction on how to use the Nursing Process Model to direct formulation of nursing diagnoses. The study further described the extent to which etiologies identifying the independent domain of nursing could be classified according to the Gartland Schema for Classification of the Etiology Component of the Nursing Diagnosis Statement and Nursing Interventions.

A one group pretest-posttest design was used and 21 subjects participated in the study. A total of 425 nursing diagnosis statements was formulated by the subjects from the pretest (n = 223) and posttest (n = 202). Results indicated that associate degree nursing students' ability to identify etiologies in the independent domain of nursing was greater after instruction on the use of the Nursing Process Model.

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CHAPTER I

INTRODUCTION

Nursing diagnoses have long been a perplexing problem for nurses. Nursing students are instructed to develop nursing diagnoses for their patients by faculty who, themselves, are often confused regarding the concept of nursing diagnosis. Consequently, the new graduate is uncomfortable with diagnosing and experiences difficulty in implementing nursing diagnoses in practice.

Nurses have, historically, rewritten the medical diagnosis and called it a nursing diagnosis without regard to the identification of the independent domain of nursing. Tatro and Gleit (1983) indicated the nursing process is the vehicle through which the independent function of nurses is established. While the nursing process is, indeed, the very foundation of nursing, its applicability in clinical practice is often poorly documented. The reason for this may be because nurses do not understand the relationship of nursing diagnosis to the implementation of the nursing process and the independent function of nursing.

The need for a way to unify nursing and establish its autonomy is critical. Nurses must justify their existence

in this rapidly changing health care system in order to firmly establish nursing as a profession. One way in which this may be accomplished is through the use of the Nursing Process Model (Ziegler, Vaughan-Wrobel, & Erlen, 1986). This model should facilitate nursing in identifying, implementing, and documenting the independent domain of nursing.

Problem of Study

The problem of this study was:

Do the associate degree nursing students' ability to identify the independent domain of nursing, as determined by the etiology component of the nursing diagnosis statement, increase after receiving instruction on how to use the Nursing Process Model to direct formulation of nursing diagnosis as compared to their ability to identify the independent domain of nursing before receiving instruction on how to use the Nursing Process Model to direct formulation of nursing diagnosis?

Although not related to the problem area, the study further described the extent to which etiologies identifying the independent domain of nursing can be classified according to the Gartland Schema for Classification of the Etiology Component of the Nursing

Diagnosis Statement and Nursing Interventions (Gartland, 1982).

Justification of Problem

It has been said that only the professional nurse should diagnose. However, there has been widespread disagreement over the term "professional nurse." Not all states, as yet, have adopted the American Nurses' Association recommendation to make the baccalaureate degree the minimum requirement for entry into professional practice. In the meantime, all nursing students are taught to diagnose, whether they are associate degree, baccalaureate, master's, or doctoral students.

In the American Nurses' Association social policy statement, nursing is defined as "the diagnosis and treatment of human responses to actual or potential health problems" (American Nurses' Association, 1980, p. 9). This definition seems to indicate that all nurses, regardless of the level of educational preparation, should diagnose human responses to health problems.

Educators are responsible for all students to develop beginning competency in diagnosing (Fredette & O'Connor, 1979). Otherwise, new graduates will not be able to practice at a level consistent with national standards of practice. State board examinations will begin to reflect

this requirement as the standards are implemented (Gordon, 1982).

In many of the hospitals in rural counties there are very few baccalaureate prepared and even fewer master's prepared nurses. Associate degree nurses are in charge of large numbers of patients and are in upper level management positions in many instances. Mundinger (1980) stated that autonomy means identity, independence, and authority. Certainly, nurses prepared at the associate degree level assuming responsibility for patient care must possess these characteristics and have an avenue for documenting nurses' unique contribution to the health care industry. Use of the Nursing Process Model (Ziegler et al., 1986) may well assist nurses in formulating nursing diagnoses that will identity the independent domain of nursing.

Conceptual Framework

The Nursing Process Model and Bruner's (1966) learning theory were used as the conceptual framework of this study. The idea of the nursing process is not new. Nursing students are introduced to the nursing process very early in their nursing education. However, the Nursing Process Model developed by Ziegler et al. (1986) is a new approach to the nursing process. This Model

views the nursing process as consisting of five steps: assessing, diagnosing, planning, implementing, and evaluating. Ziegler et al. contended that each of the steps of the nursing process is interrelated, nursing knowledge is necessary to carry out each of the steps, the nursing diagnosis serves as the pivotal point of the nursing process, and each step involves a process which ends in a product.

Ziegler et al. described assessing as the first step in the Nursing Process Model. The process of assessing is the actual collection of data by the nurse using a nursing framework. The product of assessing is the data base. It is through assessing that the nurse identifies client responses to health care problems and the hypothesized cause of the response.

Diagnosing has been identified as the second step of the Nursing Process Model. In the process of diagnosing the nurse arrives at a conclusion about the information obtained during assessing. The nursing diagnosis statement is the product of this step. It is a statement of the client's potential or actual unhealthful response and the etiology or probable cause of the response. The nursing diagnosis, specifically the etiology, gives direction for independent nursing interventions.

Planning has been identified as the third step of the Nursing Process Model. The process of planning involves the nurse devising a plan for managing the nursing diagnosis. The product of this step is the nursing care plan.

Together the nurse and client plan the care. The nursing diagnosis is the pivotal point of this plan of care. The plan of care includes client goals, predicted outcomes, nursing interventions, and nursing actions and will identify the independent functions of the nurse. The response component of the nursing diagnosis statement is used to derive the goals and predicted outcomes. The etiology component of the nursing diagnosis statement is used to derive the nursing interventions and nursing actions.

Implementing has been identified as the fourth step in the Nursing Process Model. The process of implementing occurs when the nurse carries out the planned nursing interventions. The product is the actual client outcomes which occur from implementing the plan of care.

Evaluating has been identified as the fifth step in the Nursing Process Model. The nurse determines if the nursing interventions were effective by comparing the actual outcomes with the predicted outcomes. Outcome

evaluation is the product of evaluating. Outcome evaluation is the statement regarding the degree to which the client goals were achieved.

The Nursing Process Model provides the nurse with a conceptual framework that has as its foundation the nursing process. The nursing process is familiar to most, if not all, nurses. The Nursing Process Model is adaptable to nursing curriculums and it can be used to guide the student in identifying the independent domain of nursing through the nursing diagnosis statement.

Bruner (1966) indicated that instruction should specify the way in which a body of knowledge is structured so that it can be easily grasped by the learner. The Nursing Process Model was designed to provide the structure necessary to assist the student in identifying the independent domain of nursing through the etiology component of the nursing diagnosis statement. If the Nursing Process Model provides this structure, the nursing students' ability to identify the independent domain of nursing through the etiology component of the nursing diagnosis statement should increase after they receive instruction on the use of the Model.

Assumptions

The assumptions upon which this study was based included the following:

1. The methodology for providing nursing care is the nursing process (Ziegler et al., 1986).

2. The five steps of the nursing process are assessing, diagnosing, planning, implementing, and evaluating (Ziegler et al., 1986).

3. Nursing includes independent as well as interdependent functions (Ziegler et al., 1986).

4. A nursing diagnosis is a written statement of client "response related to etiology" which the nurse can independently diagnose and treat (Ziegler et al., 1986).

5. Diagnosing is an essential component of undergraduate nursing curriculum.

6. Generating nursing diagnoses is an independent function of the professional nurse.

Hypothesis

The following directional research hypothesis was tested:

Associate degree nursing students' ability to identify etiologies in the independent domain of nursing is greater after they receive instruction on the use of

the Nursing Process Model as compared to their ability to identify etiologies in the independent domain of nursing before instruction on the use of the Nursing Process Model.

Definition of Terms

For the purpose of this study, the following key terms were operationally defined.

1. Associate degree nursing students--any student enrolled in a specific 2 year associate degree nursing program in a southern state who is in the last semester of study in the program.

2. Etiology component of the nursing diagnosis statement--the second component of the nursing diagnosis statement. If there was more than one etiology component present, each etiology was considered in a separate diagnosis with the same response component.

3. Ability to identify nursing diagnoses with the etiology component in the independent domain of nursing --the number of etiologies that identified the independent domain of nursing in the nursing diagnosis statements generated by the subjects from the pretest (Appendix A) and the posttest (Appendix B). The nursing diagnosis statement met general characteristics 1 and 2 as stated in the Essential Characteristics of Diagnosing (Ziegler et al., 1986) (Appendix C). The independent domain of

nursing is that area of nursing which falls within the realm of nursing expertise and was determined by a panel of experts using the instrument, Identifying and Classifying the Etiology Component of the Nursing Diagnosis Statement (Appendix D), adapted from the Essential Characteristics of Diagnosing. Each etiology that identified the independent domain of nursing received 1 point. The higher the score, the greater the number of etiologies identified in the independent domain of nursing.

4. Instruction on the use of the Nursing Process Model--presentation of information regarding the five steps of the nursing process where the nursing diagnosis serves as the pivotal point for the nursing process. The instruction consisted of a 1.5 hour seminar (Appendix E) in which the Nursing Process Model was presented to the subjects with the emphasis placed on the second step of the Model, which is nursing diagnosis.

5. Gartland's (1982) Schema for Classification of the Etiology Component of the Nursing Diagnosis Statement and Nursing Interventions--a schema designed to classify the etiology component of the nursing diagnosis statement and nursing interventions and utilized by the panel members to classify the etiology into a category.

Limitations

The limitations of this study were:

1. A convenience sample was used to select the subjects.

2. History, a threat to internal validity, may have affected the dependent variable in the study.

3. Validity had not been reported on the instruments.

4. Mortality, a threat to internal validity, may have affected the dependent variable in the study.

Summary

The nursing process is a scientific, analytical, rational, and problem-solving approach to the delivery of patient care. The second step of the nursing process, nursing diagnosis, is one avenue by which nursing may be able to establish autonomy. Nursing diagnosis defines and communicates the specific problems a patient is having which require nursing care. Through the use of the Nursing Process Model, nurses should be able to document the independent domain of nursing in the clinical setting and establish autonomy and accountability.

CHAPTER II

REVIEW OF LITERATURE

The purpose of this study was to determine if there is a difference between the associate degree nursing students' ability to identify etiologies in the independent domain of nursing and instruction on the use of the Nursing Process Model. This chapter presents a review of the literature regarding nursing diagnosis and education, and nursing diagnosis as being within nursing's independent domain of practice. A summary is presented at the conclusion of the chapter.

Nursing Diagnosis and Education

Nursing education today uses the nursing process as the basis for which nurses make assessments of clients, generate nursing diagnoses, plan and implement nursing interventions, and evaluate the outcomes of the nursing interventions. Nursing process, the problem-solving methodology used as the basis for nursing practice, is said to be distinctive to professional nursing practice (DeBack, 1981). However, Aspinall (1976) found deficits in nurses' theoretical knowledge base and problem-solving skills. In view of the fact that the nursing process is a series of interrelated steps and the accuracy of the

nursing diagnosis is directly related to the effectiveness of the nursing interventions, Aspinall recommended nursing educators increase their efforts to improve nurses' diagnostic skills.

McLane (1980) investigated the inclusion of nursing diagnosis into baccalaureate and graduate nursing curriculums. Seventy questionnaires were mailed to those nursing programs accredited by the National League of Nursing (NLN) which awards both baccalaureate and master's degrees. Data were analyzed from 43 of the returned questionnaires.

Eighty-one percent of the respondents reported the integration of nursing diagnosis concepts and skills into most or all of the clinical courses. Of the 81%, 60% reported integration of nursing diagnosis in all clinical nursing courses, 21% reported integration of nursing diagnosis in the majority of clinical nursing courses, 16% reported integration of nursing diagnosis into a few of the clinical nursing courses, and 2% were planning to integrate nursing diagnosis into clinical courses.

McLane found there was a lack of agreement over the definition of nursing diagnosis. However, the definitions utilized by the schools were influenced by the type of conceptual framework the school had adopted.

In addition, there was no consensus regarding the type of etiological statement that should be used in developing a nursing diagnosis. Thirty percent of the respondents reported teaching students to use "due to" statements and 21% used "related to" statements. Other terms reported were "associated with," "secondary to," and "because of." McLane contended the important question was not which of the terms is preferred, but which one leads to accurate nursing diagnoses, interventions, and desired patient outcomes.

McLane (1980) suggested one factor which may influence the diversity of opinion regarding nursing diagnoses is a lack of adequate teaching and workshops for faculty development of diagnostic skills. Forty-seven percent of the respondents reported that courses on nursing diagnoses were offered by their continuing education departments. However, it was not reported to what extent faculty participated in these courses. McLane indicated that with the widespread implementation of nursing diagnoses in curriculums and the limited time spent on faculty development of diagnostic skills, the National Task Force should begin to look closely at faculty needs.

In a telephone survey of 74 NLN accredited baccalaureate and higher degree programs, Gaines and McFarland (1984) found 81.1% of the schools reported the use of nursing diagnoses in their curriculums. This supported McLane's (1980) study regarding the widespread introduction of the concept of nursing diagnosis in education today.

Gaines and McFarland (1984) found that faculty believed the difficulties encountered by students in developing nursing diagnoses could be attributed to the length of time the student had been in school and whether a generic student or a registered nurse student made the diagnosis. Faculty felt generic students learned more easily since registered nurse students had to unlearn old approaches and then learn new approaches.

In a study investigating problem solving skills and levels of education, Frederickson and Mayer (1977) suggested baccalaureate degree nursing students possess greater critical thinking ability in general than associate degree nursing students. However, the authors stated the baccalaureate students do not use this skill in solving nursing problems. Frederickson and Mayer suggested nursing faculty should utilize techniques that

require students to use the problem-solving method in arriving at answers to problems.

Matthews and Gaul (1979), investigating nursing diagnoses, concept attainment, and critical thinking, found there was not a significant difference between graduate nursing students' and undergraduate nursing students' ability to think critically. However, it was found that graduate students identified significantly more nursing diagnoses than undergraduate students. The quality of the nursing diagnosis statements was not investigated.

Matthews and Gaul (1979) stated that nursing diagnoses are a result of the nurses' ability to apply theoretical knowledge to a clinical setting. They indicated educators should focus on identifying and teaching the cognitive task of the nurse in order to improve diagnostic abilities.

DeBack (1981) conducted a study to determine the diagnostic ability of senior nursing students in baccalaureate schools. The nursing student's ability to formulate nursing diagnoses was then related to the type of curriculum model upon which the school was based. The curriculum models were classified as developmental, systems, interactional, and mixed. Five schools were

randomly selected to participate in the study. A total of 200 nursing care plans, with the focus on nursing diagnosis, were analyzed. The specific criteria used to analyze the nursing diagnoses were (a) client rather than disease centered; (b) stated in terms of client concerns and levels of competence or dysfunction; and (c) statements of client concerns, competence, or dysfunction that can be altered or maintained through nursing action.

Analysis of the 200 nursing care plans revealed that only 28% of the students met all of the criteria for formulating a nursing diagnosis and 35% did not meet any of the criteria. From this data, DeBack concluded senior students in baccalaureate schools are seriously deficient in the ability to formulate nursing diagnoses. In looking at the criteria separately, criteria item 3--statements of clients concerns, competence, or dysfunction that can be altered or maintained through nursing action--was met by 49% of the 200 subjects when formulating nursing diagnoses. In addition, 88% stated concerns that could be altered or maintained through nursing interventions while the remaining 12% called for medical intervention. DeBack indicated this, possibly, is due to students experiencing confusion regarding the differences in practice between

physician and nurses or it may reflect the overlap that exists in the practice domain of the two professions.

The findings of DeBack's (1981) study have implications for nursing education. DeBack contended the identification of client problems which are amenable to nursing action are necessary in order to organize and build a clinical science in nursing. Several possible reasons for the lack of demonstrated competence of the students in formulating nursing diagnoses were given by DeBack. She stated nursing professors may lack the requisite knowledge to formulate nursing diagnoses themselves; the deficit may be found in the teaching framework that is used to formulate nursing diagnoses; and/or the professor's use of the concept of nursing diagnoses is such that it is not taught to the student in a clear and consistent manner.

Ziegler (1984) examined to what extent nursing diagnosis statements, formulated by master's level graduate nursing students, met certain criteria considered necessary for the nursing process to be correctly implemented. The criteria used were taken from the Instrument for Evaluating the Nursing Diagnosis Statement developed by Ziegler (1984).

One hundred sixty-eight nursing diagnosis statements were collected for analysis. Through the process of eliminating the nursing diagnoses not meeting the characteristics relating to the general criteria and criteria for the response component, only 94 nursing diagnosis statements were evaluated in regard to the etiology criteria. One of the criteria for the etiology--the etiology addresses nursing's independent function--was not met by almost 49% of the nursing diagnosis statements.

From the findings, Ziegler (1984) concluded that the "art" of formulating nursing diagnoses is not well developed at the present time. She further stated that the nursing diagnosis statements, generated from this sample, could not be used to reinforce the nursing profession's goals of accountability, autonomy, or individualized nursing care.

Ziegler (1984) pointed out that these findings supported the study of DeBack (1981). DeBack questioned the preparation of the nursing faculty in teaching nursing students to formulate nursing diagnoses.

The ultimate task of developing nursing diagnostic skills falls upon the educator (Fredette & O'Connor, 1979). These authors indicated the educator must be a

model for the student, not only in providing the educational foundation for development of nursing diagnoses but also as a skilled practitioner with nursing diagnostic skills.

Independent Domain of Nursing

Most authors agree the nursing process is the foundation of nursing practice and nursing diagnosis is the second step in the nursing process (Aspinall, 1976; Gordon, 1979; Mundinger & Jauron, 1975). Further, most authors agree the etiology of the nursing diagnosis statement should give direction for independent nursing activities (Gordon, 1979; Guzetta & Dossey, 1983; Mundinger, 1980; Ziegler, 1984). Medical problems do not reflect problems nurses can treat independently and, therefore, should not be called nursing diagnoses (Guzetta & Dossey, 1983).

Lesnik (1954) was the first to speak to the independent and dependent functions of the nurse. He indicated that every licensing administrative agency, which is created by law to control a profession, is always subject to judicial review. He stated that judicial review defining nursing function is of utmost importance to the profession of nursing. Lesnik identified seven professional nursing functions. Six are described as

independent functions requiring no medical order for their validity and one is a dependent function for which a medical order is necessary. The independent legal functions he specified were (a) supervision; (b) observation of symptoms and reactions including diagnosis without the right to prescribe medications or treatments, and limited by individual nurses's background, training, and experience; (c) charting and recording information regarding the case; (d) supervision and direction of other nurses and auxiliary personnel; (e) carrying out nursing procedures and techniques; and (f) providing health care of psychological significance. Providing health care of psychological significance involves direction, education, and social services. The only dependent function he specified was the execution of medical or nursing procedures which requires the direction or supervision of a physician.

Lesnik (1954) in identifying these independent functions, spoke to diagnosing as a legal function of the nurse. However, he limited this function by the nurse's background, education, and experience.

Andruskiw and Battick (1964) conducted a study to determine specific nursing activities related to two nursing problems: the maintenance of fluid and electrolyte

balance and the maintenance of the supply of oxygen to all body cells. The two problems were selected from the 21 nursing problems identified by Abdellah, Martin, Beland, and Matheney (1964). Twelve medical-surgical nursing instructors from six schools of nursing participated in the study. Nursing activities generated from the two problems and rated as very essential included both independent and dependent nursing functions. Although the study did not differentiate independent and dependent activities, many nursing activities that are independent in nature were listed.

Rothberg (1967) asserted nursing diagnoses are essential to professional nursing. She stated that the nurse, gathering information from independent observation, forms an evaluation of the patient through nursing diagnosis which is uniquely nursing. Rothberg argued that when a nurse makes a diagnosis she has identified care needs that are amenable to nursing. Once the diagnosis has been made, nursing activities directed toward increasing the positive health of the patient, can be implemented. She believed those needs that are beyond the scope of nursing practice are referred to appropriate health care workers. The formulation of the diagnosis amenable to nursing activities and the referral of those

needs beyond the scope of nursing practice is what Rothberg refers to as the realm of nursing therapy.

Rothberg (1967) defined nursing therapy as knowledgeable intervention based on a nursing diagnosis and directed toward moving the individual toward positive health. She claimed there was no need to make a nursing diagnosis if it did not lead to action that is classified as nursing therapy. Although no attempt was made by Rothberg to separate dependent nursing functions from independent nursing functions, nursing diagnosis was felt to be essential to the profession of nursing.

Mundinger and Jauron (1975) defined nursing diagnosis as a statement of a patient's actual or potential unhealthful response which nursing intervention can help to change in the direction of health. The definition further stated it should identify essential factors related to the response. Mundinger and Jauron (1975) considered the first clause of the nursing diagnosis as identifying patient response and guiding patient actions and the second clause as identifying related factors where nursing can intervene.

In addition, they concluded that nursing diagnosis could be the key to direct independent nursing actions. However, they felt nurses must prove to the clients that

the professional services nurses provide leads to more effective health care. In order for health care to become more effective, however, nurses must be able to say what can be treated independently and this may be accomplished through developing and writing nursing diagnoses (Mundinger & Jauron, 1975).

Meyer and Morris (1977) investigated the effect of a program of nursing activities on patients with alcoholic cardiomyopathy. The study was conducted over an 18-month period. Twenty-six male patients admitted to a veterans administration hospital were included in the sample. The subjects were placed on a nursing program and nursing interventions were developed to reduce the frequency of hospitalization and also to improve the patient's clinical condition and quality of life. Nursing interventions utilized were (a) establishing a therapeutic relationship, (b) bedrest, (c) encouraging and supporting the patient and family members, and (d) teaching. The subjects were followed in the home after discharge.

From the study, Meyer and Morris (1977) contended that the nursing program did make a significant difference in improving and reversing the stages of disease in the patients. They concluded that medical and nursing care along with patient compliance resulted in dramatic and

continued improvement in patients with alcoholic cardiomegaly.

Leslie (1981) conducted a study to determine the usefulness of the nursing diagnoses developed at the first national conference on classification of nursing diagnoses in the clinical area. The population in the study consisted of chronically-ill patients that required long term care. A total of 210 patients that ranged in age from 25 to 101 years participated in the study.

From the findings, Leslie (1981) concluded that the nursing diagnoses provided clinicians with a language for communicating problems with easily identifiable nursing interventions. She stated that nursing diagnoses could enhance communication between practitioners and third party payers. She further stated that the use of nursing diagnoses and the development of interventions for each of the diagnoses is the future direction that nursing should take.

Shoemaker (1982) attempted to clarify the meaning of the term "nursing diagnosis." Employing the Delphi technique, Shoemaker solicited opinions from 140 nurses holding at least a master's degree with a major in nursing. The panel of experts was asked to rank 70 variables related to the nursing diagnosis statement that

Shoemaker had identified through a search of the literature. These variables were ranked as an essential characteristic, important but not essential, useful as a way of explaining the term, or reject--it does not describe a characteristic of a nursing diagnosis.

Shoemaker (1982) found the panel believed an essential characteristic of a nursing diagnosis is that it refers to a condition that nurses may legally treat. She felt this demonstrated that there is a recognition of the basis for professional nursing practice that no longer allows the nurse to rely on medical orders as a basis for nursing intervention. In addition, while the collaborative role of the nurse to other health care providers was valued, the independence of professional nursing decisions was recognized. The panel agreed that an essential condition for a nursing diagnosis is that it is an independent nursing function and that an important condition is collaboration with other health care providers. However, the panel rejected corroboration by the physician as a condition for the nursing diagnosis and rejected the notion that there must be congruency between the nursing diagnosis and diagnosis made by other health care providers as a condition of the nursing diagnosis.

Kim, Suhayda, Waters, and Yocum (1978) conducted an experimental study to (a) examine nursing students' opinions on how nursing diagnoses influenced individualized nursing care plans and the delivery of patient care, (b) identify problems students have in using nursing diagnoses, and (c) evaluate how a systematized means of data categorization would effect the efficiency of nursing diagnosis identifications. The sample consisted of 49 junior level baccalaureate nursing students enrolled in a medical-surgical nursing course.

In order to determine if the students thought nursing diagnosis affected the quality of patient care, the question was asked: Does the use of nursing diagnosis affect the quality of patient care? Eighty percent of the students responded yes to this question. Students also perceived the use of nursing diagnosis as helpful in the following areas: providing for specific nursing interventions, identifying additional nursing diagnoses, kardex plans, and focusing on specific patient problems (Kim et al., 1978).

Kim et al. (1978) claimed the findings suggested that nursing diagnoses are of value throughout the care planning process. Sixty-nine percent of the students became more aware of identifying nursing actions that were

independent of physician's orders or the medical diagnoses. Thirty-one percent of the students saw the use of nursing diagnosis as relevant in determining the interdependent function of the nurse. Kim et al. contended that although some nursing actions are dependent upon the physician, all nursing actions require scientific judgment and critical thinking in order to establish the appropriateness and safety of orders.

Booher (1983) investigated the association between quality of the response component of the nursing diagnosis statement and congruence of the response component with predicted outcomes in nursing care plans. In addition, the quality of the nursing diagnosis statement was evaluated according to The Ziegler Criteria for Evaluating The Quality of the Nursing Diagnosis Statements and The Predicted Outcomes of the Nursing Care Plan.

Booher (1983), in evaluating 54 nursing diagnoses, found that only 70% of the diagnoses met criteria item 11--the activity required to modify the etiology is within the boundaries of nursing's independent function, that is, the nurse is capable and is legally and ethically expected to treat. This would indicate that nursing specific interventions could not be generated from 30% of the nursing diagnoses. It would be difficult to establish

accountability and autonomy if the etiology of the nursing diagnosis statement does not fall within nursing's independent domain.

In discussing the implications of her study, Booher (1983) claimed nursing educators should develop additional educational programs to reinforce how the steps of the nursing process are related and dependent upon one another. Certainly, accountability and autonomy would be better documented in the clinical area if the nursing process was implemented as a whole instead of implementing only part of the process.

Topham (1983), in a study comparing nursing and medical diagnoses, suggested that the use of the medical diagnosis is not helpful in planning nursing care. Topham contended that finding no significant relationship between the nursing and medical diagnosis suggested the role of the professional nurse is one of autonomy and independence.

In looking at the quality of the nursing diagnoses, Topham (1983) found that nurses had difficulty with the etiology component of the nursing diagnosis statement. Of 319 nursing diagnoses evaluated, 37% had etiologies classified as unchangeable and 42% were classified as not within the independent domain of nursing. She, therefore,

concluded that one-third of the nursing diagnoses could not be used in the planning of nursing care.

Topham's (1983) findings lend support to the work of DeBack (1981), Booher (1983), and Ziegler (1984). The findings of these studies indicated there remains considerable confusion regarding the etiology component of the nursing diagnosis statement and the criteria that it must give direction to independent nursing action.

Summary

In summary, the literature to date reveals that the formulation of the nursing diagnosis continues to be a source of difficulty for nursing educators as well as for the clinical nurse. Accurate problem-solving leads to accurate nursing diagnoses which in turn gives direction for appropriate nursing interventions (Fredette & O'Connor, 1979). There does not appear to be a standard method used to formulate nursing diagnoses in the curriculums of nursing schools. The fact that no consistent method exists in the schools to give the student direction in formulating nursing diagnoses, has direct implications on the quality of nursing care the client receives as well as on the profession of nursing in its quest to establish accountability and autonomy. If nursing is to establish its autonomy and accountability by

identifying the independent domain of nursing through nursing through nursing diagnoses, nursing educators should provide a consistent method of teaching nursing diagnosis that will assist the student in this endeavor.

CHAPTER III

PROCEDURE FOR COLLECTION AND TREATMENT OF DATA

A one group pretest-posttest design was used to determine if identification of the independent domain of nursing by associate degree nursing students was enhanced with the use of the Nursing Process Model. Polit and Hungler (1983) defined pretest-posttest design as a quasi-experimental approach whereby randomization or a control group component, or both, is missing. However, quasi-experiments do involve the manipulation of an independent variable.

The independent variable was instruction on how to use the Nursing Process Model to direct formulation of nursing diagnosis. The dependent variable was the ability to identify the independent domain of nursing as determined by the etiology component of the nursing diagnosis statement generated by associate degree nursing students.

Setting

This study was conducted at a liberal arts university located in a rural town with a population of approximately 10,000 in the southern United States. The university had

an associate degree nursing program and a bachelor of science in nursing completion program.

Population and Sample

The target population was associate degree nursing students in the southern United states. The accessible population in this study was associate degree nursing students from a specific associate degree nursing program.

Subjects were selected by convenience sampling. The faculty at the university furnished the investigator with a list of the students who were in their last semester of study in the associate degree program. The investigator visited the class in which these students were enrolled and used the last 10 minutes of class time to ask the students to participate in the study. Twenty-six subjects provided pretest data. However, only 21 subjects provided posttest data.

Protection of Human Subjects

In order to protect the rights of the subjects, permission was obtained from the Human Research and Review Committee of Texas Woman's University for conducting the study (Appendix F). Permission was also obtained from the agency where the study was conducted (Appendix G) and from Texas Woman's University graduate school (Appendix H).

The subjects were given an explanation of the purpose of the investigation, the procedure for data collection, and the risks and the benefits involved in the investigation (Appendix I). Confidentiality was guaranteed by using a code number to identify the pretest and posttest data collected on each subject. The list of names with the code numbers was destroyed after the data were collected. The subjects were informed that their participation was strictly voluntary, that it was their right to withdraw from the study at any time, and that their participation would in no way affect their grade in the nursing program. Willingness to participate in the study was indicated by the subjects signature on the consent form (Appendix J).

Instruments

Five instruments were used to collect the data and prepare the data for analysis. The first instrument used was the Demographic Data Form (Appendix K). The data collected on this instrument included age, sex, previous employment as an aide or licensed practical nurse, and the number of times the subject had repeated each level of the nursing program. The data from the demographic data form was used to describe the sample and the subjects previous exposure to nursing.

To determine the students' ability to identify the independent domain of nursing through the etiology component of the nursing diagnosis statement, nursing diagnoses were generated from two data bases. The second instrument, Data Bases 1A and 1B (Appendix A), was adapted from the assessment data for an individual (Vaughan-Wrobel & Henderson, 1982). The Data Bases were used to generate a list of nursing diagnoses in the collection of pretest data. They measured the associate degree nursing students' ability to identify the independent domain of nursing as determined by the etiology component of the nursing diagnosis statement before receiving instruction on how to use the Nursing Process Model to direct formulation of nursing diagnoses. Permission to use assessment data is shown in Appendix A.

The third instrument, Data Bases 2A and 2B (Appendix B), was adapted from the assessment data for an individual (Vaughan-Wrobel & Henderson, 1982). The data bases were used to generate a list of nursing diagnoses in the collection of posttest data. They measured the associate degree nursing students' ability to identify the independent domain of nursing as determined by the etiology component of the nursing diagnosis statement after receiving instruction on how to use the Nursing

Process Model to direct formulating nursing diagnoses. Permission to use assessment data is shown in Appendix B.

The fourth instrument, Evaluation of Structure of Nursing Diagnosis (Appendix L), was adapted from Essential Characteristics of Diagnosing developed by Ziegler et al. (1986) (Appendix C). The criteria used are considered essential for the correct structure of the nursing diagnosis statement. The general criteria for the nursing diagnosis statement consisted of items 1 and 2 which refers to the structure of the statement.

The structure of the nursing diagnosis statement was measured by item 1--both the response and etiology component are present and item 2--the components are joined with a "related to" phrase from the general characteristics of the Essential Characteristics of Diagnosing. The investigator determined if criteria items 1 and 2 were met. If criteria items 1 and 2 were met, an "X" was placed in the "YES" column on the answer sheet. If criteria items 1 and 2 were not met, an "X" was placed in the "NO" column on the answer sheet. Only those diagnoses marked "YES" were sent to the panel of experts to determine if the etiology component of the nursing diagnosis statement was in the independent domain of nursing.

The fifth instrument, Identifying and Classifying the Independent Domain of Nursing (Appendix D), was adapted from Essential Characteristics of Diagnosing and the Gartland Schema for Classification of the Etiology Component of the Nursing Diagnosis Statement and Nursing Interventions (Appendix M). The fifth instrument (Appendix D) was used to identify the independent domain of nursing and to classify the etiologies according to the Gartland Schema (Appendix M). Permission to use Gartland's instrument is shown in Appendix M.

A panel of experts using criteria item 3--the activity required to modify is within the boundaries of nursing's independent function; nurse is capable, and is legally and ethically expected to treat--determined if the etiology fell within the independent domain of nursing.

If criteria item 3 was met, the panel members placed an "X" in the "YES" column on the answer sheet. If criteria item 3 was not met, the panel members placed an "X" in the "NO" column on the answer sheet. Two of the three experts had to agree that the etiology was in the independent domain of nursing to constitute that the criteria was being met. One point was given for each yes answer. The range of scores could be from zero to infinite. These scores were used to test the hypothesis.

If criteria item 3 was met, the panel was asked to classify the etiology component of the nursing diagnosis statement in one of seven categories of Identifying and Classifying the Etiology Component of the Nursing Diagnosis Statement and Place an "X" in that category. Items 1-7 were used to classify the etiology component of the nursing diagnosis statement. Items 1-7 were:

1. Lack of knowledge or understanding (Cognitive).
2. Inability, lack of, or decreased ability to perform tasks.
3. Inability, lack of, or decreased ability to make choices, pursue a course of action.
4. Inability, lack of, or decreased ability to sustain in an effort.
5. Lacking necessary resources such as finances.
6. Environmental deficit.
7. Miscellaneous: Need for nurturance.

If the panel members were unable to classify the etiology component into one of these categories, they were asked to suggest a category into which the etiology component could be placed.

The interrater reliability for the three criteria from the Essential Characteristics of Diagnosing are as follows: criteria item 1 has been reported as .98

(Ziegler, 1983) and .76 (Briggs, 1985); criteria item 2 has been reported as .90 (Ziegler, 1983) and .78 (Briggs, 1985); and criteria item 3 has been reported as .81 (Gartland, 1982), .67 (Huff, 1983), .70 (Ziegler, 1983), .58 (Hart, 1984), and .63 (Briggs, 1985).

Data Collection

Once agency permission and approval from Texas Woman's University graduate school was obtained, data collection began. Data were collected by administration of a pretest, presentation of a seminar on the Nursing Process Model with the emphasis on nursing diagnosis (Appendix E), and a posttest. The pretest was used to generate nursing diagnoses to determine if the etiology component of the nursing diagnosis statement fell within the independent domain of nursing before instruction on the use of the Nursing Process Model. The posttest was used to generate nursing diagnosis to determine if the etiology component of the nursing diagnosis statement fell within the independent domain of nursing after instruction on the use of the Nursing Process Model. Two data bases were used in the collection of pretest and posttest data. Using randomization, one-half of the subjects received Data Base 1A and one-half of the subjects received Data Base 1B during the pretest. The subjects that received

Data Base 1A during the pretest received Data Base 2B during the posttest. The subjects that received Data Base 1B during the pretest received Data Base 2A during the posttest.

Subjects were selected by convenience sampling. The faculty at the university provided the investigator with a list of students in the class. During the last 10 minutes of class the students were asked to participate in the study. Written consent was obtained from the students willing to participate in the study and they were invited to the seminar the following day.

The first seminar was in session for a 2-hour period. Each subject was randomly assigned a code number. This number was used for identification of the collected data. The list of names used to assign the code numbers was destroyed after the second seminar. The subjects were given a 3 by 5 index card at the beginning of the first seminar on which the subject's name and code number appeared. The code number consisted of an alphabetic letter to indicate the subject's name followed by a number plus an alphabetic letter to indicate which data base, in the pretest, the subjects used to generate the nursing diagnoses: 1A indicated the first data base in the pretest and 1B indicated the second data base in

the pretest. The subjects wrote their code number on all materials passed out to them in the first seminar. Upon completion of the first seminar, the subjects were instructed to destroy the index card. The subjects were given another index card at the beginning of the second seminar on which their name and code number appeared. The code number consisted of an alphabetic letter to indicate the subject's name followed by a number plus an alphabetic letter to indicate which data base in the posttest the subject used to generate the nursing diagnoses: 2A indicated the first data base in the posttest and 2B indicated the second data base in the posttest. The subjects wrote their code number on all materials passed out to them in the second seminar. Upon completion of the second seminar, the subjects were instructed to destroy the index card.

At the beginning of the first seminar, the subjects were provided with Data Bases 1A and 1B from which they were asked to generate a list of nursing diagnosis. Approximately 30 minutes were needed to complete this portion of the seminar. The data bases and nursing diagnoses were then collected by the investigator. The remaining 1 1/2 hours were used to present the Nursing Process Model to the subjects with emphasis being placed

on the second step of the Model which is nursing diagnosis. The seminar was dismissed following the presentation of the Model with a reminder to the subjects that the next seminar would be held on the following day.

The second seminar was in session for 1 hour. The beginning 30 minutes of the seminar was used for a question and answer session. At the conclusion of the question and answer session, the subjects were provided with Data Bases 2A and 2B. They were asked to read and generate nursing diagnoses from the data bases. At the end of 30 minutes the data bases and nursing diagnoses were collected by the investigator.

Treatment of Data

Data were analyzed in three phases. The first and third phase was performed by the investigator. The second phase were performed by a panel of experts.

Phase 1

To determine which nursing diagnoses were sent to the panel of experts, the investigator evaluated the nursing diagnoses generated by the subjects to determine if each nursing diagnosis statement met criteria items 1 and 2 from the general characteristics of the Essential Characteristics of Diagnosing (Ziegler et al., 1986).

Each nursing diagnosis statement that met the characteristics was assigned a number. The nursing diagnoses generated for the pretest were assigned a number from 1-223. The nursing diagnoses generated from the posttest were assigned a number from 224-425.

Phase 2

A panel of experts independently performed this phase of the data collection. The panel was composed of three master's prepared nurses familiar with nursing diagnosis. Each panel member was provided with Identifying and Classifying the Etiology Component of the Nursing Diagnosis Statement (Appendix D) to determine if the subjects identified the independent domain of nursing. If the criteria was met, they placed an "X" in the "YES" column on the answer sheet. If the criteria was not met, they placed an "X" in the "NO" column on the answer sheet. The agreement of two of the three experts constituted the criteria as being met.

If criteria item 3 was met, the panel of experts then classified the etiology component of those nursing diagnosis statements classified as reflecting the independent domain of nursing according to items 1-7 of Identifying and Classifying the Etiology Component of the Nursing Diagnosis Statement. If the etiology could not be

classified according to these items, the panel was asked to suggest a category in which the etiology might be placed.

Phase 3

The data collected were analyzed using descriptive and nonparametric statistics. Descriptive statistics were used to describe the sample. Four tables were used to present the frequencies and the types of etiologies falling within each classification. The hypothesis for this study was: Associate degree nursing students' ability to identify etiologies in the independent domain of nursing is greater after they receive instruction on the use of the Nursing Process Model as compared to their ability to identify etiologies in the independent domain of nursing before instruction on the use of the Nursing Process Model. The hypothesis was tested using the Wilcoxin matched pairs signed rank test. Level of significance was set at .05.

CHAPTER IV

ANALYSIS OF DATA

A one group pretest-posttest design was used to determine if there was a difference between nursing students' ability to identify the independent domain of nursing after instruction on the use of the Nursing Process Model to direct formulation of nursing diagnosis, as compared to their ability to identify the independent domain of nursing before receiving instruction on the use of the Nursing Process Model to direct formulation of nursing diagnosis. This chapter presents a description and analysis of the data obtained from the study.

Description of Sample

Initially, 26 subjects participated in the study. However 5 subjects dropped out of the study after the collection of pretest data. The 21 remaining subjects provided data for the study. The sample was comprised of 2 (9.5%) males and 19 (90.5%) females. The ages of the subjects ranged from 20-49 years with the average being 27 years of age. Seven of the subjects had been previously employed in health-related fields, 2 as licensed practical nurses, 4 as nurse aides, 1 owned an ambulance service, and 1 had been a dental assistant. Three of the subjects

had repeated a level within the nursing program: 2 had repeated level 3, and 1 had repeated level 2.

A total of 425 nursing diagnosis statements was formulated by the subjects. Of these 425 nursing diagnoses statements, 223 (52.5%) were from the pretest and 202 (47.55) were from the posttest. Sixteen (3.8%) of the nursing diagnoses did not meet criteria item 1--both the response and etiology component are present--and criteria item 2--the components are joined with a "related to" phrase. Therefore, 409 (96.2%) etiologies were sent to the panel of experts to determine if criteria item 3--the activity required to modify is within the boundaries of nursing's independent function; nurse is capable, and is legally and ethically expected to treat--was met. The panel of experts received 207 pretest etiologies and 202 posttest etiologies.

Pretest Etiologies

The total number of pretest etiologies sent to the panel of experts was 207. The panel members did not reach consensus on 3 (1.4%) of the etiologies; a total of 204 etiologies was classified as meeting criteria item 3 or not meeting criteria item 3 (Appendix N). Of the 207 etiologies, 74 (35.8%) pretest etiologies met criteria

item 3 and 130 (62.8%) pretest etiologies did not meet criteria item 3 (Table 1).

Posttest Etiologies

The total number of posttest etiologies sent to the panel of experts was 202. The panel members did not reach consensus on 2 (1.0%) of the etiologies; a total of 200 etiologies was classified as meeting criteria item 3 or not meeting criteria item 3 (Appendix O). Of the 202 etiologies, 155 (76.7%) posttest etiologies met criteria item 3 and 45 (22.3%) posttest etiologies did not meet criteria item 3 (Table 2).

Classification of Etiologies into Categories

After the panel determined if the etiology met criteria item 3, they placed the etiology into categories according to the "Gartland Schema for Classification of the Etiology Component of the Nursing Diagnosis Statement and Nursing Interventions" (Gartland, 1982). Fifty-five (27.0%) of the pretest etiologies were placed into category 1, 39 (19.1%) were placed into category 2, 19 (9.3%) were placed into category 3, 22 (10.8%) were placed into category 4, 24 (11.8%) were placed into category 5, 31 (15.2%) were placed into category 6, and 15 (7.4%) were

Table 1

Frequency and Percentage of Etiologies from Pretest Data

Etiologies	Frequency	Percentage
Etiologies: consensus not reached	3	1.4
Etiologies: met criteria item 3	74	35.8
Etiologies: did not meet criteria item 3	130	62.8

n = 207.

Table 2

Frequency and Percentage of Etiologies from Posttest Data

Etiologies	Frequency	Percentage
Etiologies: consensus not reached	2	1.0
Etiologies: met criteria item 3	155	76.7
Etiologies: did not meet criteria item 3	45	22.3

n = 202.

placed into category 7. Other categories suggested by the panel of experts were assessment--12 (5.9%), anxiety/stress--1 (.50%), requires skilled intervention to prevent complication or injury--1 (.50%), and requires opportunity and freedom to communicate--2 (1.0%) (Table 3). Since the panel members placed etiologies into more than one category, the frequency and the percentage exceeded 100%. Examples of pretest etiologies falling within each of the categories are listed in Table 4. The categories were not mutually exclusive.

One hundred forty six (73.0%) of the posttest etiologies were placed into category 1, 64 (32.0%) were placed into category 2, 46 (23.0%) into category 3, 44 (22.0%) into category 4, 28 (14.0%) into category 5, 67 (33.5%) into category 6, and 42 (21.0%) into category 7. Other categories suggested by the panel were assessment--39 (19.5%), lack of etiology--5 (2.5%), needs assistance--1 (.50%); requires opportunity for communication/counseling--22 (11.%), and safety--requires protection from injury--1 (.50%) (Table 3). Since the panel members placed etiologies into more than one category, the frequency and percentage exceeded 100%. Examples of posttest etiologies falling within each

Table 3

Classification of Pretest and Posttest Etiologies According to Gartland's Schema

Gartland's Category	Pretest etiologies Frequency	Pretest etiologies Percentage	Posttest etiologies Frequency	Posttest etiologies Percentage
1. Lack of knowledge or understanding (cognitive)	55	27.0	146	73.0
2. Inability, lack of, or decreased ability to perform tasks	39	19.1	64	32.0
3. Inability, lack of, or decreased ability to make choices, pursue a course of action	19	9.3	46	23.0
4. Inability, lack of, or decreased ability to sustain in an effort	22	10.8	44	22.0
5. Lacking necessary resources such as finances	24	11.8	28	14.0
6. Environmental deficit	31	15.2	67	33.5
7. Miscellaneous: need for nurturance	15	7.4	42	21.0

n = 74

Table 4

Examples of Pretest Etiologies Classified According to Gartland's Schema

Gartland's Category	Etiology
1. Lack of knowledge or understanding (cognitive)	-knowledge deficit -improper home management of diabetes
2. Inability, lack of, or decreased ability to perform tasks	-immobility -pain upon movement
3. Inability, lack of, or decreased ability to make choices, pursue a course of action	-decreased activity level -lack of motivation
4. Inability, lack of, or decreased ability to sustain in an effort	-decreased nutrient intake -weakness
5. Lacking necessary resources such as finances	-possible role change -noncompliance with prescribed medical regimen
6. Environmental deficit	-limited food intake -poor sleeping habits

(table continues)

Gartland's Category	Etiology
7. Miscellaneous: need for nurturance	-lack of motivation -decreased body image

category are listed in Table 5. The categories were not mutually exclusive.

Interrater reliability was computed on criteria item 3--the activity required to modify is within the boundaries of nursing's independent function; nurse is capable, and is legally and ethically expected to treat--from the Essential Characteristics of Diagnosing developed by Ziegler et al. (1986) that was used by the panel of experts. Interrater reliability was computed according to the following formula (Polit & Hungler, 1983):

$$\frac{\text{number of agreements}}{\text{number of agreements and disagreements}}$$ (p.392)

Agreements indicated that two or more of the panel of experts agreed that the etiology met criteria item 3 or did not meet criteria item 3. Disagreements indicated that two or more of the panel of experts did not reach a consensus on the etiology meeting criteria item 3 or not meeting criteria item 3. The interrator reliability for criteria item 3, from the pretest data, was .99. The interrator reliability for criteria item 3, from the posttest data, was .99.

Findings

The Wilcoxin matched pairs signed rank test was used to test the hypothesis. This test involved taking the

Table 5

Examples of Posttest Etiologies Classified According to Gartland's Schema

Gartland's Category	Etiology
1. Lack of knowledge or understanding	-lack of knowledge of breathing techniques -inadequate wound care
2. Inability, lack of, or decreased ability to perform tasks	-lack of comfort measures -decreased self-image regarding colostomy
3. Inability, lack of, or decreased ability to make choices, pursue a course of action	-poor sleeping habits -alteration in body image
4. Inability, lack of, or decreased ability to sustain in an effort	-inadequate home maintenance -decreased feelings of self-worth due to lack of adequate support systems
5. Lacking necessary resources such as finances	-lack of financial assistance - poor diet
6. Environmental deficit	-lack of sleep -lack of interests or hobbies

(table continues)

Gartland's Category	Etiology
7. Miscellaneous: need for nurturance	-inability to perform own care -decreased orientation

difference between the paired scores of the subject and ranking the absolute difference (Polit & Hungler, 1983).

The research hypothesis for this study was: Associate degree nursing students' ability to identify etiologies in the independent domain of nursing is greater after they receive instruction on the use of the Nursing Process Model as compared to their ability to identify etiologies in the independent domain of nursing before instruction on the use of the Nursing Process Model. Utilizing the Wilcoxin matched pairs signed rank test with the level of significance set at .05, a significant difference was found between nursing student's ability to identify etiologies in the independent domain of nursing after instruction on the use of the Nursing Process Model (T = 79, p <.0019). Therefore, the research hypothesis was supported.

Summary of Findings

The data supported the research hypothesis, therefore, associate degree nursing students' ability to identify etiologies in the independent domain of nursing is greater after they receive instruction on the use of the Nursing Process Model as compared to their ability to identify etiologies in the independent domain of nursing

before instruction on the use of the Nursing Process Model. The hypothesis was tested utilizing the Wilcoxin matched pairs signed rank test.

All etiologies were classified according to Gartland's (1982) Schema. The majority of the pretest etiologies (27.0%) and the posttest etiologies (73.0%) were classified into category 1--lack of knowledge or understanding (cognitive). The panel members were unable to place an etiology into just one category of Gartland's (1982) Schema. The categories in Gartland's Schema were not mutually exclusive.

CHAPTER V

SUMMARY OF THE STUDY

The problem of this study was: Does the associate degree nursing students' ability to identify the independent domain of nursing, as determined by the etiology component of the nursing diagnosis statement, increase after receiving instruction on how to use the Nursing Process Model to direct formulation of nursing diagnosis as compared to their ability to identify the independent domain of nursing before receiving instruction on how to use the Nursing Process Model to direct formulation of nursing diagnosis? The study further described the extent to which etiologies identifying the independent domain of nursing could be classified according to the Gartland (1982) Schema for Classification of the Etiology Component of the Nursing Diagnosis Statement and Nursing Interventions. This chapter presents a summary of the findings, a discussion of the findings, conclusions and implications based on the findings, and recommendations for further study.

Summary

This study was conducted to determine if there was a difference between nursing students' ability to identify

the independent domain of nursing after receiving instruction on how to use the Nursing Process Model to direct formulation of nursing diagnosis as compared to their ability to identify the independent domain of nursing before receiving instruction on how to use the Nursing Process Model to direct formulation of nursing diagnosis. The conceptual framework of this study was based upon the Nursing Process Model (Ziegler et al., 1986) and Bruner's (1966) learning theory. This study presented one research hypothesis.

The study was conducted at a liberal arts university located in a rural town in the southern United States. Twenty-one subjects participated in this study. The subjects generated a total of 425 nursing diagnosis statements from the data bases. Sixteen of the 425 nursing diagnosis statements could not be used for data analysis because they did not meet criteria item 1--both the response and etiology component are present--and criteria item 2--the components are joined with a "related to" phrase--leaving a total of 409 etiology components that was sent to a panel of experts. Two hundred and seven of the 409 etiology components were generated from the pretest. Two hundred and two of the 409 etiology components were generated from the posttest.

A panel of three experts was used to determine if the etiology component met criteria item 3--the activity required to modify is within the boundaries of nursing's independent function; nurse is capable, and is legally and ethically expected to treat. If the panel member determined the etiology met criteria item 3, the etiology was classified according to Gartlant's Schema. If the etiology could not be classified according to Gartland's Schema, the panel member suggested a category into which the etiology might be placed. Tables were used to present the frequencies and types of etiologies falling within each category of Gartland's (1982) Schema. It was found that the categories were not mutually exclusive.

The research hypothesis for this study was: Associate degree nursing students' ability to identify etiologies in the independent domain of nursing is greater after they receive instruction on the use of the Nursing Process Model as compared to their ability to identify etiologies in the independent domain of nursing before instruction on the use of the Nursing Process Model. The hypothesis was tested utilizing the Wilcoxin matched pairs signed rank test. Level of significance was set at .05.

Data analysis revealed a significant difference in associate degree nursing students' ability to identify

etiologies in the independent domain of nursing after they received instruction on the use of the Nursing Process Model as compared to their ability to identify etiologies in the independent domain of nursing before instruction on the use of the Nursing Process Model (T = 79, p .0019). Therefore, the research hypothesis was supported.

Discussion of Findings

The research hypothesis for this study was supported. The findings revealed associate degree nursing students' ability to identify etiologies in the independent domain of nursing after instruction on the use of the Nursing Process Model was significantly greater.

In addition, the Gartland (1982) Schema for Classification of the Etiology Component of the Nursing Diagnosis Statement and Nursing Interventions was used to classify each etiology and the findings revealed that the panel members were unable to place an etiology into just one category. This would suggest the categories should be more clearly defined if Gartland's (1982) Schema is used again. The majority of the pretest etiologies (27.0%) and the posttest etiologies (73.0%) were classified into category 1--lack of knowledge or understanding (cognitive). Examples of pretest etiologies falling into category 1 were (a) knowledge deficit and (b) improper

home management of diabetes. Examples of posttest etiologies falling into category 1 were (a) lack of knowledge of breathing techniques and (b) inadequate wound care.

The pretest data from this study revealed an inability, by the subjects, to generate nursing diagnoses falling within nursing's independent domain. However, after receiving instruction on the use of the Nursing Process Model to direct formulation of nursing diagnoses, the subjects' ability to generate nursing diagnoses falling within nursing's independent domain increased significantly.

This study confirmed the beliefs of Bruner (1966). Bruner maintained that instruction should specify the way in which a body of knowledge is structured in order for the learner to easily grasp the material. The Nursing Process Model, by providing this structure, assisted nursing students in the formulation of nursing diagnoses.

The pretest data from this study supported the study of DeBack (1981). DeBack stated there was a lack of demonstrated competence of students in formulating a nursing diagnosis. DeBack suggested the reason for this may be in the teaching framework used to formulate nursing

diagnoses or from a lack of requisite knowledge by the faculty to formulate nursing diagnoses.

In addition, the pretest findings of this study supported the beliefs of Ziegler (1984). Ziegler maintained the "art" of formulating nursing diagnoses is not well developed at the present time. She contended the nursing diagnosis statements generated by her study sample could not be used to reinforce accountability, autonomy, or to individualize nursing care. Only 35.8% of the pretest etiologies from this study fell within the independent domain of nursing. The remaining 62.8% could not be used to reinforce nursing's unique contribution in the health care field.

Some caution should be used when interpreting the data from the present findings. The 20% mortality of the sample could have affected the results of the present study since there was no way of knowing if this biased the sample.

Conclusions and Implications

The following conclusions were identified from the findings:

1. The Nursing Process Model, by providing structure as Bruner (1966) suggested, assists nursing students in

formulating nursing diagnoses that fall within nursing's independent domain.

2. The categories in the Gartland (1982) Schema for Classification of the Etiology Component of the Nursing Diagnosis Statement and Nursing Interventions may not be well enough defined to use as a classification for nursing interventions.

The implications of this study are that a model which provides structure for the nursing student should be used by nursing faculty. The Nursing Process Model gives the student direction in formulating nursing diagnoses and implementing nursing interventions. In order for nursing to reach the goals of autonomy and accountability, the nursing diagnosis must reflect nursing's independent domain.

Recommendations for Further Study

The following are recommendations for further research:

1. The study should be repeated having baccalaureate and master's level nursing students comprise the sample.

2. A similar study should be conducted in which the panel members receive the data bases used by the subjects

to formulate the nursing diagnosis statements and/or the complete nursing diagnosis statements.

3. A similar study should be conducted in which all of the criteria from the Essential Characteristics of Diagnosing (Ziegler et al., 1986) are used to evaluate the nursing diagnosis statement.

4. A study should be conducted to further refine the categories in the Gartland (1982) Schema for Classification of the Etiology Component of the Nursing Diagnosis Statement and Nursing Interventions.

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APPENDIX A

Pretest

Instructions for Data Base 1A

Following is a list of instructions for completion of this portion of the seminar. Please read this carefully and ask questions for clarification if necessary.

1. You should have 4 pages with Data Base 1A and one answer sheet. Make sure your code number appears on each sheet.

2. Read Data Base 1A.

3. List as many nursing diagnoses as you can on the answer sheet provided to you.

4. You have 30 minuites to complete this task. At the end of this time, please return Data Base 1A and the answer sheet to the investigator.

DATA BASE 1A

Code Number_____

Patient Profile

Mr. S. is a 42-year-old black male who has been recdently admitted to the hospital complaining of pain and discoloration in his right foot. He works at odd jobs but at present is unemployed. He does not have any hobbies or special interests. He has irregular eating habits with breakfast consisting of two cups of coffee and supper consisting of meat and occasionally vegetables. His sleep habits are irregular. He usually sleeps less than 8 hours a night. He smokes when he can afford it or when he can borrow cigarettes from his friends. He drinks alcohol every evening and occasionally "ties one on." He did not maintain eye contact during assessment. He seems to understand the questions that were asked although they had to be repeated frequently. He seems to have limited understanding regarding management of diabetes.

History of Present Illness

This is a 42-year-old black male with a 22 year history of diabetes. He dropped a heavy box on his right foot 10 days ago, causing a laceration of the skin over the metatarsal. The foot became very swollen and he was unable to wear a shoe. He soaked his foot in hot water,

but this did not give him relief from pain. The toes gradually turned black and the intensity of the pain increased. The pain is now radiating up the leg as far as the knee. He consumed whiskey and aspirin in an effort to deaden the pain.

He has gangrene of four digits (except the great toe) on the right foot and cellulities over the anterior foot to the ankle. He has signs and symptoms of ketoacidosis. He was treated in the emergency room and subsequently admitted to the hospital.

Past Medical History

Mr. S. has a poor memory of past illnesses and immunizations. He has been hospitalized "6 or 7 times for high sugar." His present medications include Orinase 500 milligrams daily. He states he ran out of this medication "several days ago" and has been to ill to have it refilled. He denies allergies to food or medication.

Family History

Mr. S. is uncertain about his family history. His mother, however, has diabetes and hypertension.

Review of Systems

Mr. S. states he has been "poorly since going into the army." He has no lesions except for those on his

right foot. He has experienced increasing difficulty in reading small print but has not had an eye exam since he was in the service. He denies history of heart disease or hypertension but states his circulation is not good because of his "high sugar." He states he feels hungry and thirsty now but is too nauseated to eat. He has experienced polyuria since his foot has become worse. He denies headaches except those associated with a hangover.

The old chart reveals two hospitalizations for alcoholism complicated by diabetic ketoacidosis. He does not test his urine, wear any special type of shoes, pay special attention to his skin and feet, or follow a routine diet.

Physical Examination

Vital signs on admission were temperature--99.0; pulse--110 and regular; respirations--32 with deep labored breathing and a fruity odor to the breath; and blood pressure--108/84. His height is 6'0" and his weight is 140 pounds.

This 42-year-old black male is thin, lethargic, and has a disheveled appearance. He is cooperative but his facial expression indicates he is in pain. His skin turgor is poor. His skin is warm, dry, and dirty. His hands and feet have numerous calluses on them and his

shoes fit poorly. Gross visual acuity reveals an inability to read fine print at 3 feet. Several of his teeth are broken and he has multiple caries. His teeth are tobacco stained. In his left leg, the femoral, popliteal, dorsalis pedis, and the posterior tibial pulse are normal. In the right leg, the femoral and popliteal pulses are decreased and the dorsalis pedis and posterior tibial pulses are absent. He has tissue necrosis of four digits (excluding the great toe) on the right foot. There are areas of cellulitis over the anterior foot up to the ankle. The right foot and midcalf are cold to the touch.

Laboratory data reveal the following: WBC--15,000/cumm and blood sugar 500 mg/100ml. Urinalysis reveals a specific gravity of 1:008, a ph of 4.0, and sugar is 4+.

Note. From The problem oriented system in nursing: A workbook (2nd ed.) by B. Vaughan-Wrobel and B. Henderson, 1982, St. Louis: C. V. Mosby. Reprinted by permission.

Answer Sheet for Data Base 1A

Code Number_____

Nursing Diagnosis

Instructions for Data Base 1B

Following is a list of instructions for completion of this portion of the seminar. Please read this carefully and ask questions for clarification if necessary.

1. You should have 4 pages with Data Base 1B and one answer sheet. Make sure your code number appears on each sheet.

2. Read Data Base 1B.

3. List as many nursing diagnoses as you can on the answer sheet provided to you.

4. You have 30 minutes to complete this task. At the end of this time, please return Data Base 1B and the answer sheet to the investigator.

DATA BASE 1B

Code Number_____

Patient Profile

Mr. C. is a 21-year-old white male who was admitted to the hospital after he was stabbed in the chest and stomach when an unidentified man attempted to rob him. He is employed as an interstate truck driver and travels 7 days on the road and then has 5 days off. He eats a well balanced diet and sleeps 8 hours a night while on the road. He is single and maintains a close relationship with his family which consists of his mother, father, sister, and brother. He enjoys fishing, swimming, playing basketball, and shooting pool. Mr. C. smokes one-half pack of cigarettes a day and occasionally drinks beer with his friends. During the assessment he was quiet, reserved, and cooperative. He comprehends and responds to questions without difficulty. He has a basic understanding that his organs have been damaged.

History of Present Illness

This 21-year-old white male sustained stab wounds of the chest and abdomen in an apparent robbery attempt. The physical examination revealed: deep lacerations superior to the right nipple and medial to the left nipple anteriorly. Breath sounds were diminished in the right

lower lobe. The chest x-ray revealed a small pneumothorax. Thoracotomy tubes were inserted and connected to suction. There were deep lacerations on the abdomen; one below the right costal margin and two superficial lacerations over the right flank. The abdomen was diffusely tender with absence of bowel sounds. A Levin tube was inserted and connected to low Gomco. A #16 Foley catheter was connected to drainage. An intravenous infusion was started with 1,000 ml of Ringer's lactate. An exploratory laparotomy (repair of colon perforation with exteriorization and transverse loopcolostomy) was performed. The surgery was completed without complications.

Past Medical History

Mr. C has had the chicken pox and the usual childhood immunizations. He has had no previous hospitalizations. He is not presently taking medication. He denies allergies to food or medication.

Family History

Mr. C. denies a family history of diabetes, hypertension, heart disease, cancer, or tuberculosis.

Review of Systems

Mr. C. considers his health to be good. He has had no changes in his skin texture, color, or turgor. He has had no anemia or unusual bleeding. He has never worn glasses and had an eye examination last year. He has no history of hearing loss. He did have several ear infections as a child. There has been no discharge from his nose or frequent sore throats. He had several cavities filled last year by the family dentist. He has no discharge, pain, or tenderness in the breasts. He has no history of respiratory problems but smokes one-half pack of cigarettes a day. He has had no chest pain. There are no problems with appetite, constipation, or diarrhea. He denies any nausea or vomiting. He has a normal bowel movement every 1 to 2 days. There are no complaints of dysuria, urgency, frequency, or infection. He has no history of venereal disease. He has no history of headaches, seizures, or loss of consciousness. He appears to be coping well with his present condition.

Physical Examination

Vital signs on admission to the surgical unit were: temperature--98.8, pulse--90, respirations--20, blood pressure--110/80. His height is 5'11" and his weight is 170 pounds.

This 21-year-old white male is a well-developed, cooperative young man in no acute distress, but he appears uncomfortable. The skin is dry, of good color and turgor. Lesions are present as described in present illness. The pupils are equal and react to light and accommodation. His breath is slightly foul with pink buccal mucosa and normal size tonsils. There is no nasal discharge. His neck is supple with full range of motion. There is no venous distention or carotid bruit. His respirations are 20 per minute and slightly shallow. He has decreased tactile fremitus over the right lower lobe with decreased breath sounds. He has a weak, nonproductive cough. He uses his abdominal muscles for breathing. Two thoracotomy tubes are connected to suction and located in the right chest. He has a normal sinus rhythm. The carotid, brachial, radial, femoral, popliteal, and pedal pulses are strong and regular. The abdomen is tender and bowel sounds are absent. He has a Levin tube to suction. The loop colostomy is located along the upper midabdominal line. He has full range of motion in all extremities. He is alert, cooperative, and oriented to time, place, and person.

Laboratory data reveal the following: WBC--6,000/cu mm, RBC--5.0 million/cu mm, Hct--31.3 Vol/100 ml,

Hgb--10.8 Gm/100 ml, Na--135 mEg/L, and K--5.0 mEg/L.

Chest x-ray reveals a small pneumothorax on the right.

Note. From The problem oriented system in nursing: A workbook (2nd ed.) by B. Vaughan-Wrobel and B. Henderson, 1982, St. Louis: C. V. Mosby. Reprinted by permission.

Answer Sheet for Data Base 1B

Code Number_____

Nursing Diagnosis

Box 625, TWU Residence Hall
1810 Inwood Road
Dallas, Texas 75235
March 14, 1985

Dr. Beth Vaughan-Wrobel
Coordinator, Graduate Studies
Texas Woman's University
1810 Inwood Road
Dallas, Texas 75235

Dear Dr. Vaughan-Wrobel,

I am presently enrolled as a graduate student at Texas Woman's University. I am interested in researching the nursing diagnosis statement and the identification of the independent domain of nursing. I would like permission to use the assessment data for the individuals from the book, The Problem-Oriented System in Nursing: A workbook (2nd ed.).

Your signature at the bottom of the page will indicate your permission to use the assessment data. I appreciate your consideration of this request and look forward to hearing from you.

Sincerely,

Brenda Wright

Brenda Wright, B.S.N.

I give my permission for the use of the assessment data for the individuals from the book, The Problem-Oriented System in Nursing: A workbook (2nd ed.), to Brenda Wright for data collection in her research study.

Beth A. Vaughan-Wrobel, R.N., Ed.D.

APPENDIX B

Posttest

Instructions for Data Base 2A

Following is a list of instructions for completion of this portion of the seminar. Please read this carefully and ask questions for clarification if necessary.

1. You should have 4 pages with Data Base 2A and one answer sheet. Make sure your code number appears on each sheet.

2. Read Data Base 2A.

3. List as many nursing diagnoses as you can on the answer sheet provided to you.

4. You have 30 minuites to complete this task. At the end of this time, please return Data Base 2A and the answer sheet to the investigator.

DATA BASE

Code Number_____

Patient Profile

Mr. S. is a 42-year-old black male who has been recdently admitted to the hospital complaining of pain and discoloration in his right foot. He works at odd jobs but at present is unemployed. He does not have any hobbies or special interests. He has irregular eating habits with breakfast consisting of two cups of coffee and supper consisting of meat and occasionally vegetables. His sleep habits are irregular. He usually sleeps less than 8 hours a night. He smokes when he can afford it or when he can borrow cigarettes from his friends. He drinks alcohol every evening and occasionally "ties one on." He did not maintain eye contact during assessment. He seems to understand the questions that were asked although they had to be repeated frequently. He seems to have limited understanding regarding management of diabetes.

History of Present Illness

This is a 42-year-old black male with a 22 year history of diabetes. He dropped a heavy box on his right foot 10 days ago, causing a laceration of the skin over the metatarsal. The foot became very swollen and he was unable to wear a shoe. He soaked his foot in hot water,

but this did not give him relief from pain. The toes gradually turned black and the intensity of the pain increased. The pain is now radiating up the leg as far as the knee. He consumed whiskey and aspirin in an effort to deaden the pain.

He has gangrene of four digits (except the great toe) on the right foot and cellulities over the anterior foot to the ankle. He has signs and symptoms of ketoacidosis. He was treated in the emergency room and subsequently admitted to the hospital.

Past Medical History

Mr. S. has a poor memory of past illnesses and immunizations. He has been hospitalized "6 or 7 times for high sugar." His present medications include Orinase 500 milligrams daily. He states he ran out of this medication "several days ago" and has been to ill to have it refilled. He denies allergies to food or medication.

Family History

Mr. S. is uncertain about his family history. His mother, however, has diabetes and hypertension.

Review of Systems

Mr. S. states he has been "poorly since going into the army." He has no lesions except for those on his

right foot. He has experienced increasing difficulty in reading small print but has not had an eye exam since he was in the service. He denies history of heart disease or hypertension but states his circulation is not good because of his "high sugar." He states he feels hungry and thirsty now but is too nauseated to eat. He has experienced polyuria since his foot has become worse. He denies headaches except those associated with a hangover.

The old chart reveals two hospitalizations for alcoholism complicated by diabetic ketoacidosis. He does not test his urine, wear any special type of shoes, pay special attention to his skin and feet, or follow a routine diet.

Physical Examination

Vital signs on admission were temperature--99.0; pulse--110 and regular; respirations--32 with deep labored breathing and a fruity odor to the breath; and blood pressure--108/84. His height is 6'0" and his weight is 140 pounds.

This 42-year-old black male is thin, lethargic, and has a disheveled appearance. He is cooperative but his facial expression indicates he is in pain. His skin turgor is poor. His skin is warm, dry, and dirty. His hands and feet have numerous calluses on them and his

shoes fit poorly. Gross visual acuity reveals an inability to read fine print at 3 feet. Several of his teeth are broken and he has multiple caries. His teeth are tobacco stained. In his left leg, the femoral, popliteal, dorsalis pedis, and the posterior tibial pulse are normal. In the right leg, the femoral and popliteal pulses are decreased and the dorsalis pedis and posterior tibial pulses are absent. He has tissue necrosis of four digits (excluding the great toe) on the right foot. There are areas of cellulitis over the anterior foot up to the ankle. The right foot and midcalf are cold to the touch.

Laboratory data reveal the following: WBC--15,000/cumm and blood sugar 500 mg/100ml. Urinalysis reveals a specific gravity of 1:008, a ph of 4.0, and sugar is 4+.

Note. From The problem oriented system in nursing: A workbook (2nd ed.) by B. Vaughan-Wrobel and B. Henderson, 1982, St. Louis: C. V. Mosby. Reprinted by permission.

Answer Sheet for Data Base 2A

Code Number_____

Nursing Diagnosis

Instructions for Data Base 2B

Following is a list of instructions for completion of this portion of the seminar. Please read this carefully and ask questions for clarification if necessary.

1. You should have 4 pages with Data Base 2B and one answer sheet. Make sure your code number appears on each sheet.

2. Read Data Base 2B.

3. List as many nursing diagnoses as you can on the answer sheet provided to you.

4. You have 30 minutes to complete this task. At the end of this time, please return Data Base 2B and the answer sheet to the investigator.

DATA BASE 2B

Code Number_____

Patient Profile

Mr. C. is a 21-year-old white male who was admitted to the hospital after he was stabbed in the chest and stomach when an unidentified man attempted to rob him. He is employed as an interstate truck driver and travels 7 days on the road and then has 5 days off. He eats a well balanced diet and sleeps 8 hours a night while on the road. He is single and maintains a close relationship with his family which consists of his mother, father, sister, and brother. He enjoys fishing, swimming, playing basketball, and shooting pool. Mr. C. smokes one-half pack of cigarettes a day and occasionally drinks beer with his friends. During the assessment he was quiet, reserved, and cooperative. He comprehends and responds to questions without difficulty. He has a basic understanding that his organs have been damaged.

History of Present Illness

This 21-year-old white male sustained stab wounds of the chest and abdomen in an apparent robbery attempt. The physical examination revealed: deep lacerations superior to the right nipple and medial to the left nipple anteriorly. Breath sounds were diminished in the right

lower lobe. The chest x-ray revealed a small pneumothorax. Thoracotomy tubes were inserted and connected to suction. There were deep lacerations on the abdomen; one below the right costal margin and two superficial lacerations over the right flank. The abdomen was diffusely tender with absence of bowel sounds. A Levin tube was inserted and connected to low Gomco. A #16 Foley catheter was connected to drainage. An intravenous infusion was started with 1,000 ml of Ringer's lactate. An exploratory laparotomy (repair of colon perforation with exteriorization and transverse loopcolostomy) was performed. The surgery was completed without complications.

Past Medical History

Mr. C has had the chicken pox and the usual childhood immunizations. He has had no previous hospitalizations. He is not presently taking medication. He denies allergies to food or medication.

Family History

Mr. C. denies a family history of diabetes, hypertension, heart disease, cancer, or tuberculosis.

Review of Systems

Mr. C. considers his health to be good. He has had no changes in his skin texture, color, or turgor. He has had no anemia or unusual bleeding. He has never worn glasses and had an eye examination last year. He has no history of hearing loss. He did have several ear infections as a child. There has been no discharge from his nose or frequent sore throats. He had several cavities filled last year by the family dentist. He has no discharge, pain, or tenderness in the breasts. He has no history of respiratory problems but smokes one-half pack of cigarettes a day. He has had no chest pain. There are no problems with appetite, constipation, or diarrhea. He denies any nausea or vomiting. He has a normal bowel movement every 1 to 2 days. There are no complaints of dysuria, urgency, frequency, or infection. He has no history of venereal disease. He has no history of headaches, seizures, or loss of consciousness. He appears to be coping well with his present condition.

Physical Examination

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This 21-year-old white male is a well-developed, cooperative young man in no acute distress, but he appears uncomfortable. The skin is dry, of good color and turgor. Lesions are present as described in present illness. The pupils are equal and react to light and accommodation. His breath is slightly foul with pink buccal mucosa and normal size tonsils. There is no nasal discharge. His neck is supple with full range of motion. There is no venous distention or carotid bruit. His respirations are 20 per minute and slightly shallow. He has decreased tactile fremitus over the right lower lobe with decreased breath sounds. He has a weak, nonproductive cough. He uses his abdominal muscles for breathing. Two thoracotomy tubes are connected to suction and located in the right chest. He has a normal sinus rhythm. The carotid, brachial, radial, femoral, popliteal, and pedal pulses are strong and regular. The abdomen is tender and bowel sounds are absent. He has a Levin tube to suction. The loop colostomy is located along the upper midabdominal line. He has full range of motion in all extremities. He is alert, cooperative, and oriented to time, place, and person.

Laboratory data reveal the following: WBC--6,000/cu mm, RBC--5.0 million/cu mm, Hct--31.3 Vol/100 ml,

Hgb--10.8 Gm/100 ml, Na--135 mEg/L, and K--5.0 mEg/L.

Chest x-ray reveals a small pneumothorax on the right.

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Answer Sheet for Data Base 2B

Code Number_____

Nursing Diagnosis

APPENDIX C

Essential Characteristics of Diagnosing

Essential Characteristics of Diagnosing

Component	Characteristic
General	1. Both the response and etiology component are present. 2. The components are joined with a "related to" phrase. 3. The response component is written first and the etiology component is written second. 4. The statement is asymetrical, that is not circular. 5. Evidence that a pattern exists in the assessment data upon which the diagnosis was made (including both subjective and objective data). 6. Evidence that the client's response is related to the etiology (cause) hypothesized (including both empirical and theoretical evidence).
Response Component	1. The response is clearly unhealthy or written as a potentially unhealthful response. 2. Only one response is identified for each diagnosis statement. 3. The response is potentially modifiable. 4. The response is concrete enough to generate specific client goals.

Component	Characteristic
Etiology Component	1. Only one etiology is identified for each diagnosis statement. 2. The etiology is potentially changeable. 3. The activity required to modify is within the boundaries of nursing's independent function; nurse is capable, and is legally and ethically expected to treat. 4. Etiology is concrete enough to generate specific nursing interventions.

Note. From Nursing process, nursing diagnosis, nursing knowledge: Avenues to autonomy, by S. Ziegler, B. Vaughan-Wrobel, and J. Erlen, 1986, Norwalk, CT: Appleton-Century-Crofts. Reprinted by permission.

APPENDIX D

Identifying and Classifying the Etiology Component of the Nursing Diagnosis Statement

Dear

Please find enclosed the data I have collected for researching the independent domain of nursing as identified by the etiology component of the nursing diagnosis statement. Only those nursing diagnoses meeting criteria items 1 and 2 from my study have been included:

Criteria item 1 - Both the response and etiology component are present.

Criteria item 2 - The components are joined with a "related to" phrase.

The portion of the nursing diagnosis you have received includes only the etiology component of the nursing diagnosis statement. On the following page you will find an instruction sheet. This sheet should be used as a reference in completing the forms.

I would like to take this opportunity to thank you for agreeing to participate on the panel. I have enclosed a self-addressed stamped envelope for your convenience in returning the completed forms. If I may be of assistance please do not hesitate to contact me. Again, thank you for your participation on the panel.

Sincerely,

Brenda Wright, B.S.N.

INSTRUCTION SHEET

Identifying and Classifying the Etiology Component of the Nursing Diagnosis Statement

The independent domain of nursing will be evaluated according to the following criteria. Place an "X" in the "YES" column on the answer sheet if criteria item 3 is met. Place and "X" in the "NO" column on the answer sheet if criteria item 3 is not met.

Criteria 3:[a] The activity required to modify is within the boundaries of nursing's independent function; nurse is capable, and is legally and ethically expected to treat.

If criteria item 3 has been met, please classify the etiology component of the nursing diagnosis statement according to the following items. Place an "X" in the column on the answer sheet where the etiology component could be classified. If the etiology component cannot be classified according to these items, suggest a category in which the etiology component could be placed in the "OTHER" column on the answer sheet.

Category[b]

1 - Lack of knowledge or understanding (Cognitive)

2 - Inability, lack of, or decreased ability to perform tasks

3 - Inability, lack of, or decreased ability to make choices, pursue a course of action

4 - Inability, lack of, or decreased ability to sustain in effort

5 - Lacking necessary resources such as finances

6 - Environmental deficit

7 - Miscellaneous: Need for nurturance

[a]Note. From Nursing process, nursing diagnosis, nursing knowledge: Avenues to autonomy, by S. Ziegler, B. Vaughan-Wrobel, and J. Erlen, 1986, Norwalk, CT: Appleton-Century-Crofts. Reprinted by permission.

[b]Note. From Nursing diagnosis and etiology specific interventions by K. Gartland, 1982, Denton, TX: Texas Woman's University (unpublished master's thesis). Reprinted by permission.

Answer Sheet for Identifying and Classifying
the Etiology Component of the
Nursing Diagnosis Statement

Etiology Component of Nursing Diagnosis	Criteria Item 3		Category							
	Yes	No	1	2	3	4	5	6	7	Other

APPENDIX E

Seminar

Seminar

The Nursing Process Model consists of five interrelated steps: assessing, diagnosing, planning, implementing, and evaluating. Knowledge is required for each step and the nursing diagnosis serves as the pivotal point of the process. Each step is a process that ends in a product.

Assessing is the first step in the Nursing Process Model. This process involves the nurse collecting information on the client to determine his/her needs. The product of this step is the data base.

Diagnosing is the second step in the Nursing Process Model. The process of diagnosing involves arriving at a conclusion about the client's needs from the data base. The product of diagnosing is the nursing diagnosis statement. The nursing diagnosis is a statement of the client's potential or actual unhealthful response and the etiology of that response.

The structure of the nursing diagnosis statement consist of two components:

1. The potential or actual unhealthful response of the client to a problem.

2. The etiology of cause of the response.

In order for the nursing diagnosis to serve as a pivotal

point, the patient response to a problem and the etiology for the response must be present. The etiology must give direction for interventions requiring nursing expertise. In other words, the etiology must fall within the independent domain of nursing.

Planning is the third step in the Nursing Process Model. The process of planning involves the nurse and client deciding on a plan to meet the client's needs. The nursing care plan is the product of this step and includes the independent and interdependent functions of the nurse.

When the nurse and the client develop the plan of care based on the nursing diagnosis, the goals and predicted outcomes, the nursing interventions and nursing actions are identified. These are included in the care plan that outlines the independent functions of the nurse.

The client goal is the desired client response stated in the direction of health. Predicted outcomes are measurable variables that will determine if the goals are met.

The nursing intervention prevents, modifies, removes, or controls factors believed to be the cause of the client's potential or actual unhealthful response. Nursing actions are the specific activities used to carry out the nursing interventions.

The first component of the nursing diagnosis statement, the behavioral response of the client, generates the client goals and predicted outcomes. These are expected client behaviors that determine if the nursing interventions are successful. The second component of the nursing diagnosis statement, the etiology, gives direction for the nursing interventions and nursing actions.

Implementing is the fourth step in the Nursing Process Model. The process of implementing is the "carrying out" of the planned nursing interventions. The product of this step is the actual client outcomes which are a result of the planned nursing interventions. The actual client outcomes are the changes in the client's behavior that occur due to the planned nursing interventions.

Evaluating is the fifth step in the Nursing Process Model. The process of evaluating involves comparing the actual client outcomes with the predicted outcomes to determine the effectiveness of the nursing interventions. The product of this step is the outcome evaluation. Outcome evaluation is a statement of the degree to which the client goals were met.

Diagnosing

Diagnosing as a process involves the cognitive act of analyzing the data obtained through assessing and drawing a conclusion from that data about whether a need for nursing exists. The product of diagnosing is the nursing diagnosis statement of the client's potential or actual unhealthful response and the etiology of the response. Without the nursing diagnosis, there would be nothing upon which to base the planning.

Diagnosing as a Process

After the nurse collects the data, she analyzes the data by searching for significant cues. She determines which of these cues are significant by comparing them to norms and standards. The cues are then clustered into patterns. A cue is the "specific subjective and objective data identified in the data base which suggest a human response to an actual or potential health problem or the cause for that response. A pattern is assigned to a cluster of related cues."

The cues that are related are identified as a pattern and a work label is assigned to this pattern. Nursing knowledge is used to identify significant cues, to group cues that are related, and to infer there is a pattern.

The nurse then draws a conclusion about the unhealthful client responses that are present. The patterns that have been identified will be used for the response or probable cause of the response (the etiology). Using nursing knowledge, the cause or etiology is then related to the unhealthful response. A nursing diagnosis is formulated when the response and etiology are stated. The nursing diagnosis(es) are then prioritized. Maslow's hierarchy of needs or the degree of risk to the client are possible ways to prioritize nursing diagnoses.

Diagnosing as a Product

There are 2 components of the nursing diagnosis statement: 2 components joined with a "related to" phrase. The first component is the client's potential or actual unhealthful response and the second component is the etiology or probable cause of the response.

Response Component

The response component is the client's potential or actual unhealthful response to a problem. This is a behavioral response that can be prevented or improved through nursing interventions.

Examples of the response component are: "potential constipation related to _ _ _" or "4+ anxiety related to _ _ _."

Etiology Component

The etiology component identifies the probable cause of the response component. The etiology must be potentially changeable and amenable to nursing's independent interventions. This is what makes the statement a nursing diagnosis. The treatment for the etiology component falls within the independent domain of nursing.

Possible etiologies for the response components named above are: "potential constipation related to lack of adequate roughage in the diet" or "4+ anxiety related to lack of knowledge of relaxation techniques."

Independent and Interdependent Functions Of the Nurse

There are two types of nursing functions: independent functions and interdependent functions. Independent functions include the activities the nurse performs under her professional license. These activities include such activities as teaching, counseling, and assisting the client with activities of daily living.

Interdependent functions include the activities the nurse carries out under the direction of a physician or other appropriate health care team member. This includes such activities as giving medications, dressing changes, and performing treatments.

Depending on the clinical setting, the percentage of time the nurse spends on independent and interdependent functions will vary. Nurses employed in the acute care setting will deal more with the medical diagnosis than in a nursing run clinic where one would expect a predominance of nursing's independent activities.

Certainly, the nursing diagnosis cannot direct every activity a nurse performs. The nursing diagnosis should, however, be concerned with and limited to the independent function of the nurse. This is not to say, though, that the interdependent functions of the nurse are not important as well.

The nursing care plan should consist of two parts. One may be used for the interdependent function of the nurse, the other for the independent function of the nurse. If nursing is to establish itself as an autonomous profession, the nursing care plan must reflect the independent functions of the nurse as well as the interdependent functions. The "rule of thumb" to be used

to determine if a nursing diagnosis is appropriate in a clinical setting is: distinguish diagnoses with etiologies requiring nursing's independent function from diagnoses with etiologies within the domain of medical therapy.

Note. From Nursing process, nursing diagnosis, nursing knowledge: Avenues to autonomy, by S. Ziegler, B. Vaughan-Wrobel, and J. Erlen, 1986, Norwalk, CT: Appleton-Century-Crofts. Reprinted by permission.

APPENDIX F

Research Review Committee Approval

TEXAS WOMAN'S UNIVERSITY
COLLEGE OF NURSING

PROSPECTUS FOR THESIS/DISSERTATION/PROFESSIONAL PAPER

This prospectus proposed by: Brenda Wright

_____ and entitled:

The Nursing Process Model's Utility In Assisting
Associate Degree Nursing Students To Identify
The Independent Domain Of Nursing

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

This research is (check one):

__X__ Is exempt from Human Subjects Review Committee review because this research is classified as Category I and involves minimal risks to the subjects.

_____ Requires Human Subjects Review Committee review because _____

Research Committee:

Chairperson, Barbara C. Vaughan-Wrobel, RN, Ed.D.

Member, Sylvia T. Byers

Member, Shirley M. Ziegler

Date: March 25, 1985

Dallas Campus __X__ Denton Campus ___ Houston Campus ___

APPENDIX G

Agency Permission Form

TEXAS WOMAN'S UNIVERSITY
COLLEGE OF NURSING

AGENCY PERMISSION FOR CONDUCTING STUDY*

THE University of Arkansas at Monticello

GRANTS TO Brenda Wright
a student enrolled in a program of nursing leading to a Master's Degree at Texas Woman's University, the privilege of its facilities in order to study the following problem. Does the associate degree nursing students' ability to identify the independent domain of nursing as determined by the etiology component of the nursing diagnosis statement increase after receiving instruction on how to use the Nursing Process Model to direct formulation of nursing diagnosis? The study will further describe the extent to which etiologies identifying the independent domain of nursing can be classified according to the Gartland Schema for Classification of the Etiology Component of the Nursing Diagnosis Statement and Nursing Interventions.
The conditions mutually agreed upon are as follows:

1. The agency (may) (~~may not~~) be identified in the final report.

2. The names of consultative or administrative personnel in the agency (may) (~~may not~~) be identified in the final report.

3. The agency (~~wants~~) (does not want) a conference with the student when the report is completed.

4. The agency is (willing) (~~unwilling~~) to allow the completed report to be circulated through interlibrary loan.

5. Other _____

_____

Date _____ Signature of Agency Personnel

Brenda Wright
Signature of Student

Ruth C. Vaughan-Wood Ed.D.
Signature of Faculty Advisor

*Fill out & sign 3 copies to be distributed: Original-student; 1st copy-Agency; 2nd copy-TWU School of Nursing

APPENDIX H

Graduate School Letter of Approval

TWU Texas Woman's University
P O Box 22479 Denton Texas 76204 (817) 383-2302 Metro 434-1757 Tex-An 834-2133
THE GRADUATE SCHOOL

May 22, 1985

Ms. Brenda Joyce Wright
Box 625, TWU Residence Hall
1810 Inwood Rd.
Dallas, TX 75235

Dear Ms. Wright:

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,

Leslie M Thompson IV

Leslie M. Thompson
Provost

tb

cc Dr. Beth Vaughan-Wrobel
Dr. Anne Gudmundsen

APPENDIX I

Oral Presentation to Subjects

Oral Presentation to Subjects

My name is Brenda Wright. I am presently involved in a research project at Texas Woman's University graduate school of nursing in Dallas, Texas. This study involves the identification of the independent domain of nursing by associate degree nursing students through nursing diagnosis. You were chosen for participation in this study because of your knowledge of the nursing process and previous exposure to nursing diagnosis through your current nursing program.

This study will involve two seminars. The first seminar will last approximately 2 hours. The second seminar will be conducted the following day and last approximately 1 hour. At the beginning of the first seminar you will be presented with a data base to read. From this data base you will be asked to generate nursing diagnoses. It will take approximately 30 minutes to complete this portion of the seminar. The data base and nursing diagnoses will then be collected by the investigator. The next 1 1/2 hours will be used to present the Nursing Process model with emphasis being placed on the second step of the Model which is nursing diagnosis. The next meeting will consist of a 30 minute question and answer session at the beginning of the

seminar. You will be given a different data base, after the question and answer session, and again asked to generate nursing diagnoses. The data base and nursing diagnoses will be collected by the investigator. You may obtain a copy of the results of this study from the Department of Nursing at your university.

The potential benefit to you will be your ability to use a model to assist you in making appropriate nursing diagnoses for your clients in order for the nursing process to be implemented. The benefits to nursing will be an improvement in the documentation of the nursing process and nursing's independent domain of practice. There will be minimal risks involved in this study.

There will be no names used in this study with which to identify you. You are to use a code number on the material that will be passed out to you. The list of names used to assign the code numbers will be destroyed after the second seminar. You will be given a 3 by 5 index card at the beginning of the first seminar on which your name and a code number will be found. This code number should be written on all materials passed out to you. You may destroy this index card after the first seminar. You will be given another 3 by 5 index card at the beginning of the second seminar on which your name and

a code number will be found. This code number should be written on all materials passed out to you. You may destroy this index card after the second seminar. Your participation in this study is strictly voluntary and you may withdraw from the study at any time. This is not a test and in no way will affect your grade in your nursing program. Your willingness to participate in the study will be indicated by your signature on the consent form. I will be glad to answer any questions you have regarding the study.

Thank you for your time and your participation in the study.

APPENDIX J

Consent Form

Consent Form
Texas Woman's University
College of Nursing

Consent to Act as a Subject for Research and Investigation:

1. I hereby authorize Brenda Wright
(Name of person)
to perform the following procedure:

Presentation of the Nursing Process Model to assist in directing formulation of nursing diagnoses.

2. The procedure of investigation listed in Paragraph 1 has been explained to me by Brenda Wright
(name)

3. (a) I understand that the procedures or investigations described in Paragraph 1 involve the following possible risks or discomforts:

There will be minimal risks involved in this investigation. In order to protect confidentiality, a code number will be used to identify each subject and the list of names will be destroyed. This study in no way will affect the grades of the subjects.

(b) I understand that the procedure or investigation described in Paragraph 1 have the following potential benefits to myself and/or others:

The potential benefit is the knowledge of a model that may assist the subjects in making appropriate nursing diagnoses for clients in order for the nursing process to be implemented.

(c) I understand that no medical service or compensation is provided to subjects by the university as a result of injury from participating in research.

4. An offer to answer all of my questions regarding the study has been made. If alternative procedures are more advantageous to me, they have been explained. I understand that I may terminate my participation in the study at any time.

_____ _____
Subject's Signature Date

APPENDIX K

Demographic Data Form

Demographic Data Form

Please complete the following form:

Code number: _____

Age: _____ Sex: Male _____ Female _____

1. Have you previously been employed as a (an):
   LPN Yes _____ No _____
   Aide Yes _____ No _____

2. Have you been employed in any other health related field?
   Yes _____ No _____

   If yes, in which health related field have you been employed?

3. Have you repeated a level in this nursing program?
   Yes _____ No _____

   If yes, which level (s) have you repeated?
   Level 1 _____ Level 3 _____
   Level 2 _____ Level 4 _____

   How many times have you repeated each level?
   Level 1 _____ Level 3 _____
   Level 2 _____ Level 4 _____

APPENDIX L

Evaluation of Structure of Nursing Diagnosis

Evaluation of Structure of Nursing Diagnosis

The structure of the nursing diagnosis statement will be evaluated according to the following criteria. Place an "X" in the "YES" column on the answer sheet if criteria items 1 and 2 are met. Place an "X" in the "NO" column on the answer sheet if criteria items 1 and 2 are not met.

1 - Both the response and etiology component are present.

2 - The components are joined with a "related to" phrase.

Note. From Nursing process, nursing diagnosis, nursing knowledge: Avenues to autonomy, by S. Ziegler, B. Vaughan-Wrobel, and J. Erlen, 1986, Norwalk, CT: Appleton-Century-Crofts. Reprinted by permission.

Answer Sheet for Evaluation of
Structure of Nursing Diagnosis

Nursing Diagnosis	Criteria Items 1 and 2	
	Yes	No

APPENDIX M

Gartland Schema for Classification

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

Category Number	Etiology	Intervention
1	Lack of knowledge or understanding (Cognitive)	Teach, instruct, explain, demonstrate, show, point out
2	Inability, lack of, or decreased ability to perform	Assist, provide, perform (Any verb that indicates hands on care)
3	Inability, lack of, or decreased ability to make choices, pursue a course of action	Counsel, suggest, plan, direct, guide, identity, advise, supervise
4	Inability, lack of, or decreased ability to sustain in an effort	Support, allow, encourage, maintain, reinforce, reassure, approve
5	Lacking necessary resources such as finances	Refer, consult
6	Environmental deficit	Manipulate environment, ensure safety, health, and growth and development aspects of environment
7	Miscellaneous: need for nurturance	Inherent "caring" component of nursing role (TLC)
8	Miscellaneous: Etiology reflects medical diagnosis	Dependent role of nurse

Category Number	Etiology	Intervention
9	Miscellaneous: Nature of etiology ambiguous	"Shot-gun" approach, try everything; diffuse nursing action

Note. From Nursing diagnosis and etiology specific interventions by K. Gartland, 1982, Denton, TX: Texas Woman's University (unpublished master's thesis). Reprinted by permission.

Box 625
TWU Residence Hall
1810 Inwood Rd.
Dallas, TX 75235
February 11, 1985

Ms. Karen Gartland
5757 Martel
Dallas, TX 75206

Dear Ms. Gartland:

I am presently enrolled as a graduate student at Texas Woman's University. I am interested in researching the nursing diagnosis statement, specifically, the identification of the independent domain of nursing. I would like your permission to use the Gartland Schema for Classification of the Etiology Component of the Nursing Diagnosis Statement and Nursing Interventions.

Your signature at the bottom of this page will indicate your permission to use the Schema for Classification. I have enclosed a self-addressed stamped envelope for your convenience. I appreciate your time and effort in assisting me with my research and look forward to hearing from you.

Sincerely,

Brenda Wright

Brenda Wright, B.S.N.

I give my permission for the use of the Gartland Schema for Classification of the Etiology Component of the Nursing Diagnosis Statement and Nursing Interventions to Brenda Wright for data collection in her research study.

Karen Gartland

APPENDIX N

Pretest Etiologies Meeting Criteria Item 3

Pretest Etiologies Meeting Criteria Item 3
Or Not Meeting Criteria Item 3

Etiology Statement	Criteria item 3 Yes	No	Undecided
1. injured right foot		X	
2. knowledge deficit	X		
3 knowledge deficit about diabetes	X		
4. hyperglycemia		X	
5. polyuria		X	
6. inadequate circulation		X	
7. noncompliance	X		
8. limited food intake	X		
9. history of diabetes		X	
10. laceration of right foot		X	
11. poor sleeping habits	X		
12. too much insulin		X	
13. history of hypertension		X	
14. hospital stay	X		
15. weakness	X		
16. confusion	X		
17. infection		X	
18. urinary tract infection		X	
19. smoking	X		
20. inactivity	X		
21. injury		X	
22. gangrene of right toe		X	
23. improper home maintenance of diabetes	X		
24. alcoholism	X		
25. elevated temperature		X	
26. unemployment		X	
27. diabetes		X	
28. improper diet	X		
29. foot care	X		
30. infection of right foot		X	
31. stab wounds		X	

Pretest Etiologies Meeting Criteria Item 3
Or Not Meeting Criteria Item 3

Etiology Statement	Criteria item 3 Yes	No	Undecided
32. contamination of wound		X	
33. wound		X	
34. suction		X	
35. colostomy	X		
36. nasogastric tube	X		
37. surgery		X	
38. contamination of surgical incision		X	
39. incision		X	
40. wound drainage		X	
41. recent surgery		X	
42. decreased physical resistance and integrity		X	
43. hazards of immobility	X		
44. possible role change	X		
45. decreased appetite	X		
46. hospitalization		X	
47. multiple injury		X	
48. intravenous therapy		X	
49. change in diet	X		
50. interruption of integrity of lung tissue due to stab wound		X	
51. increased intestinal damage due to stab wound		X	
52. critical location of stab wound over vital organs		X	
53. alveolar/bronchial damage associated with chest wound		X	
54. continuing blood loss due to stab wound		X	
55. increased blood loss		X	

Pretest Etiologies Meeting Criteria Item 3
Or Not Meeting Criteria Item 3

Etiology Statement	Criteria item 3 Yes	No	Undecided
56. decreased hemoglobin and hematocrit associated with blood loss		X	
57. lack of previous hospitalization		X	
58. current need for extensive medical treatment		X	
59. laceration with invasion of microorganisms		X	
60. infection and tissue necrosis		X	
61. lack of knowledge	X		
62. gangrenous infection		X	
63. decreased circulation due to diabetes		X	
64. noncompliance with prescribed medical regimen	X		
65. surgical incision		X	
66. medical treatment		X	
67. pneumothorax		X	
68. admitting diagnosis		X	
69. nasogastric suction	X		
70. poor insight	X		
71. lacerated blood vessels		X	
72. scars		X	
73. postoperative complications		X	
74. surgical incision		X	
75. IV		X	
76. catheter		X	
77. thoracotomy tubes		X	
78. tissue necrosis		X	
79. unemployment			X
80. lack of knowledge on diabetes mellitus	X		
81. dehydration	X		
82. ketoacidosis		X	

Pretest Etiologies Meeting Criteria Item 3
Or Not Meeting Criteria Item 3

Etiology Statement	Criteria Item 3 Yes	No	Undecided
83. reduced circulation of right foot and leg		X	
84. lack of knowledge concerning diabetes mellitus, its care, and aspects of treatment	X		
85. increased insulin requirements		X	
86. poor failing eyesight		X	
87. lack of knowledge of importance of good oral hygiene	X		
88. nausea and vomiting		X	
89. presence of colostomy	X		
90. abdominal suction		X	
91. impaired lung expansion		X	
92. immobility	X		
93. altered state of health	X		
94. shallow respiration		X	
95. lack of circulation to the body tissues		X	
96. decreased activity	X		
97. decreased food intake	X		
98. lack of knowledge of potential danger	X		
99. noncompliance with oral hypoglycemic agent	X		
100. lack of knowledge of disease	X		
101. increased food intake	X		
102. lacerations of abdomen and thorax		X	
103. unfamiliar environment	X		
104. absent bowel sounds		X	
105. operation		X	
106. pain upon movement	X		
107. bedrest	X		
108. insertion of tubes		X	
109. present illness		X	
110. decreased activity level	X		

Pretest Etiologies Meeting Criteria Item 3
Or Not Meeting Criteria Item 3

Etiology Statement	Criteria item 3 Yes	No	Undecided
111. decreased intake of fluid	X		
112. decreased intake	X		
113. foley catheter	X		
114. thoracotomy tubes		X	
115. levin tube			X
116. shallow respirations		X	
117. necrotic state of right foot		X	
118. lethargic state		X	
119. inadequate circulation		X	
120. lack of motivation	X		
121. possible confusion	X		
122. contamination of abdomen and chest wound		X	
123. internal injuries		X	
124. abdominal wounds		X	
125. chest wounds		X	
126. shallow respirations due to pneumothorax		X	
127. decreased body image	X		
128. excess blood loss		X	
129. lung congestion		X	
130. blood loss		X	
131. decreased peristalsis		X	
132. feeling of helplessness	X		
133. recent losses	X		
134. scars		X	
135. suctioning	X		
136. IV sites	X		
137. decreased nutrient intake	X		
138. lacerated lung		X	
139. orientation to hospital	X		
140. alveolar/bronchial damage associated with smoking		X	
141. laceration of foot		X	
142. hospital stay	X		

Pretest Etiologies Meeting Criteria Item 3
Or Not Meeting Criteria Item 3

Etiology Statement	Criteria item 3 Yes	No	Undecided
143. urinary tract infection		X	
144. alcoholism	X		
145. gangrene		X	
146. surgery		X	
147. injury		X	
148. injury		X	
149. lack of knowledge	X		
150. diabetes		X	
151. medical treatment		X	
152. colostomy	X		
153. stab wound		X	
154. suction		X	
155. colostomy	X		
156. IV		X	
157. reduced circulation of right foot and leg		X	
158. hospitalization		X	
159. pneumothorax		X	
160. laceration		X	
161. suction		X	
162. lack of knowledge	X		
163. surgical incision		X	
164. injury		X	
165. hospitalization		X	
166. hyperglycemia		X	
167. laceration of right foot		X	
168. infection		X	
169. pneumothorax		X	
170. post-op complications		X	
171. laceration		X	
172. tube insertion		X	
173. lacerated area on right foot		X	
174. gangrene of right foot		X	
175. lack of knowledge concerning illness	X		
176. polyuria		X	
177. wound		X	
178. IV		X	

Pretest Etiologies Meeting Criteria Item 3
Or Not Meeting Criteria Item 3

Etiology Statement	Criteria item 3 Yes	No	Undecided
179. wounds		X	
180. wounds		X	
181. nasogastric tube	X		
182. wound		X	
183. wounds		X	
184. colostomy	X		
185. colostomy	X		
186. IV		X	
187. colostomy	X		
188. IV		X	
189. foley catheter	X		
190. levin tube			X
191. lack of knowledge	X		
192. Iv therapy		X	
193. decreased food intake	X		
194. hazards of immobility	X		
195. deep lacerations		X	
196. wounds		X	
197. lack of knowledge	X		
198. colostomy	X		
199. foley	X		
200. surgery		X	
201. suctioning	X		
202. chest wounds		X	
203. lack of knowledge	X		
204. colostomy	X		
205. lacerations		X	
206. abdominal wound		X	
207. increased blood sugar		X	

APPENDIX O

Posttest Etiologies Meeting Criteria Item 3

Posttest Etiologies Meeting Criteria Item 3
Or Not Meeting Criteria Item 3

	Etiology Statement	Criteria item 3 Yes	No	Undecided
1.	inadequate wound care	X		
2.	lack of knowledge of breathing techniques	X		
3.	lack of knowledge of colostomy care	X		
4.	decreased self image regarding scars from stab wounds	X		
5.	lack of knowledge of movement regarding tubes or placement	X		
6.	lack of comfort measures	X		
7.	lack of knowledge regarding care of wound	X		
8.	decreased self image regarding colostomy	X		
9.	chest pain		X	
10.	lack of knowledge concerning procedures	X		
11.	fear of movement due to thoracotomy tube	X		
12.	stasis of secretions	X		
13.	administration of IV fluids	X		
14.	decreased activity of bowels		X	
15.	abdominal pain	X		
16.	fear of movement due to levin tube	X		
17.	fear of movement due to foley	X		
18.	lack of knowledge of disease process	X		
19.	lack of knowledge of diabetic diet	X		
20.	poor sleeping habits	X		
21.	too much food intake	X		
22.	lack of knowledge about low sodium diet	X		

Posttest Etiologies Meeting Criteria Item 3
Or Not Meeting Criteria Item 3

Etiology Statement	Criteria item 3 Yes	No	Undecided
23. lack of knowledge of mouth care	X		
24. lack of knowledge about relaxation techniques	X		
25. lack of knowledge about medications	X		
26. disease process		X	
27. the numerous tubes to various body parts			X
28. drainage from chest		X	
29. excessive and thick mucous	X		
30. alteration in body image	X		
31. NPO		X	
32. lack of knowledge of diabetes	X		
33. lack of knowledge regarding management of diabetes	X		
34. poor eyesight		X	
35. lack of knowledge of urine testing	X		
36. lack of support systems	X		
37. lack of knowledge of importance of complying with medication administration	X		
38. inadequate diet	X		
39. inadequate hygiene knowledge	X		
40. inadequate exercise	X		
41. diet deficient in roughage	X		
42. inadequate home maintenance	X		
43. irregular eating habits	X		
44. drinking problems		X	

Posttest Etiologies Meeting Criteria Item 3
or Not Meeting Criteria Item 3

Etiology Statement	Criteria item 3 Yes	No	Undecided
45. unavailable identification for diabetic patient recognition			X
46. alcohol consumption		X	
47. lack of knowledge of proper diet, exercise, and rest regime	X		
48. ineffective self-treatment	X		
49. lack of knowledge of improper medication regimen upon body	X		
50. lack of knowledge of proper eye care associated with effects of diabetes and microcirculation	X		
51. denial of effects of diabetes on cardiovascular and renal systems	X		
52. misinterpretation of effects of diabetes on cardiovascular and renal systems	X		
53. lack of knowledge of proper foot care associated with diabetes	X		
54. noncompliance with dietary/drug/alcohol/ activity associated with diabetic condition	X		
55. decreased feelings of self-worth due to lack of adequate support systems	X		
56. unfamiliar surroundings	X		

Posttest Etiologies Meeting Criteria Item 3
or Not Meeting Criteria Item 3

Etiology Statement	Criteria item 3 Yes	No	Undecided
57. fear of displacing chest tubes	X		
58. invasive procedures (catheter, IV)		X	
59. procedures		X	
60. lack of knowledge about colostomy, colostomy care, and diet	X		
61. invasion of microorganisms		X	
62. altered self-image due to colostomy	X		
63. positioning due to fear of displacing tubes	X		
64. inability to verbalize feelings	X		
65. decreased self-concept	X		
66. lack of financial assistance	X		
67. misconception of disease process	X		
68. lack of treatment		X	
69. trauma of right foot		X	
70. lack of knowledge of medication administration	X		
71. lack of knowledge concerning proper urine testing procedure	X		
72. ineffective coping mechanisms	X		
73. lack of knowledge concerning proper oral care	X		
74. pain	X		
75. respiratory dysfunction		X	

Posttest Etiologies Meeting Criteria Item 3
or Not Meeting Criteria Item 3

Etiology Statement	Criteria Item 3 Yes	No	Undecided
76. disruption of skin integrity		X	
77. decreased blood volume		X	
78. chest tubes		X	
79. immobility (prolonged bedrest)	X		
80. care of colostomy	X		
81. lack of nutritional knowledge	X		
82. lack of sleep	X		
83. anxiety	X		
84. lack of knowledge concerning importance of medications	X		
85. poor diet	X		
86. lack of knowledge of nutrition	X		
87. inadequate fluid intake	X		
88. improperly fitted shoes	X		
89. inadequate oral hygiene	X		
90. decreased circulation	X		
91. lack of interests or hobbies	X		
92. nausea		X	
93. alcohol consumption		X	
94. excess fluid loss		X	
95. inability to secure medication		X	
96. financial disability	X		
97. alcohol intake		X	
98. inability to secure proper food	X		
99. inability to perform own care	X		
100. lack of understanding regarding vocabulary	X		
101. lack of knowledge of hospital procedures	X		

Posttest Etiologies Meeting Criteria Item 3
or Note Meeting Criteria Item 3

Etiology Statement	Criteria Item 3 Yes	No	Undecided
102. lack of toothbrush, toothpaste, and assistance	X		
103. lack of knowledge of appropriate respiratory techniques	X		
104. inadequate coughing techniques	X		
105. lack of knowledge of colostomy	X		
106. fear of dislodging chest tubes	X		
107. lack of knowledge of range of motion exercises	X		
108. lack of knowledge of equipment	X		
109. lack of understanding regarding management of diabetes	X		
110. decreased orientation	X		
111. lack of knowledge concerning nutrition and proper diet	X		
112. lack of knowledge concerning his present state of health	X		
113. lack of motivation to clean his teeth	X		
114. diet	X		
115. noncompliance	X		
116. possible loss of foot		X	
117. pain from stab wound	X		
118. too much food intake	X		
119. lack of knowledge of effects of cigarette smoking	X		
120. lack of knowledge of condition	X		
121. decreased intake of oxygen		X	

Posttest Etiologies Meeting Criteria Item 3
or Not Meeting Criteria Item 3

Etiology Statement	Criteria Item 3 Yes	No	Undecided
122. hospital environment		X	
123. decreased knowledge of diabetes	X		
124. vasoconstriction (due to smoking)		X	
125. elevated blood sugar		X	
126. low self-esteem	X		
127. fear of moving leg because of pain	X		
128. lack of knowledge of complication of diabetes	X		
129. lack of relaxation measures	X		
130. lack of exercise	X		
131. techniques performed on patient	X		
132. decreased activity	X		
133. foley	X		
134. gangrene of right foot		X	
135. too much insulin		X	
136. lacerated foot area		X	
137. bedrest	X		
138. hospital stay	X		
139. urinary tract infection		X	
140. gangrene of right foot		X	
141. hazards of immobility	X		
142. lack of knowledge of disease process	X		
143. lack of knowledge about relaxation techniques	X		
144. hospitalization		X	
145. lack of knowledge	X		
146. decreased activity	X		
147. decreased activity	X		
148. lack of knowledge	X		
149. lack of knowledge of proper breathing techniques	X		
150. procedures		X	

Posttest Etiologies Meeting Criteria Item 3
or Not Meeting Criteria Item 3

Etiology Statement	Criteria Item 3 Yes	No	Undecided
151. lack of knowledge	X		
152. lack of knowledge concerning diabetic disease process	X		
153. lack of knowledge of diabetic diet	X		
154. lack of knowledge of disease process	X		
155. lack of knowledge concerning disease process	X		
156. lack of knowledge concerning disease process	X		
157. colostomy	X		
158. surgical incision		X	
159. hospitalization		X	
160. colostomy	X		
161. pneumothorax		X	
162. iv		X	
163. catheter		X	
164. NG tube	X		
165. NG tube	X		
166. lack of nutritional knowledge	X		
167. lack of knowledge	X		
168. lack of knowledge	X		
169. lack of knowledge concerning diabetic foot care	X		
170. lack of knowledge	X		
171. anxiety	X		
172. lack of knowledge concerning diabetic diet	X		
173. lack of knowledge	X		
174. lack of motivation	X		
175. immobility	X		
176. irregular eating habits	X		

Posttest Etiologies Meeting Criteria Item 3
or Not Meeting Criteria Item 3

Etiology Statement	Criteria Item 3 Yes	No	Undecided
177. lack of knowledge concerning diabetic disease process	X		
178. ketoacidosis		X	
179. diabetes mellitus		X	
180. alcoholism	X		
181. fear of displacing chest tubes	X		
182. pain	X		
183. disease process		X	
184. pain	X		
185. invasion of microorganisms		X	
186. alteration in body image	X		
187. lack of knowledge of diabetic diet	X		
188. knowledge deficit	X		
189. decreased body image	X		
190. decreased circulation	X		
191. decreased circulation	X		
192. irregular sleep habits	X		
193. lack of knowledge of diabetes	X		
194. lack of knowledge of diabetes	X		
195. lack of knowledge of diabetes	X		
196. pain	X		
197. lack of knowledge of diabetic disease process	X		
198. lack of knowledge concerning diabetic diet	X		
199. lack of knowledge concerning importance of medication and its proper use	X		
200. hospitalization		X	

Posttest Etiologies Meeting Criteria Item 3
or Not Meeting Criteria Item 3

Etiology Statement	Criteria Item 3 Yes	No	Undecided
201. lack of comfort measures	X		
202. lack of motivation	X		