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UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

RELATIONSHIPS AMONG SELF-EFFICACY, ANXIETY, PERCEPTIONS OF CLINICAL INSTRUCTOR EFFECTIVENESS AND SENIOR BACCALAUREATE NURSING STUDENTS' PERCEPTIONS OF LEARNING IN THE CLINICAL ENVIRONMENT

A Dissertation

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

Doctor of Philosophy

By

Alma Rambo, M.S., R.N.
Norman, Oklahoma
1997

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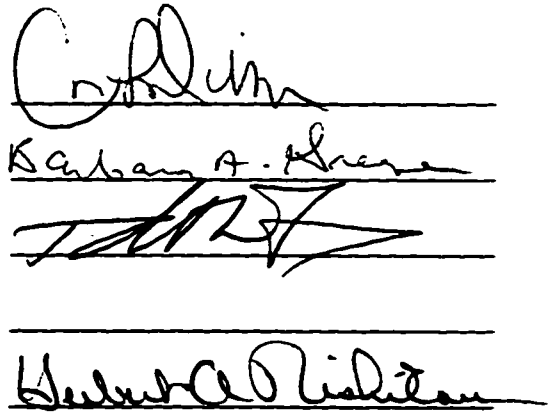
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RELATIONSHIPS AMONG SELF-EFFICACY, ANXIETY, PERCEPTIONS OF CLINICAL TEACHER EFFECTIVENESS AND SENIOR BACCALAUREATE NURSING STUDENTS' PERCEPTIONS OF LEARNING IN THE CLINICAL ENVIRONMENT

A Dissertation APPROVED FOR THE
DEPARTMENT OF EDUCATIONAL LEADERSHIP AND POLICY STUDIES

BY



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DEDICATION

For my parents, Pearl and K.W. Rambo

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RELATIONSHIPS AMONG SELF-EFFICACY, ANXIETY, PERCEPTIONS OF CLINICAL INSTRUCTOR EFFECTIVENESS AND SENIOR BACCALAUREATE NURSING STUDENTS' PERCEPTIONS OF LEARNING IN THE CLINICAL ENVIRONMENT

ABSTRACT

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1997

The purposes of this study were: to describe relationships among baccalaureate nursing students' self-efficacy, anxiety, perceptions of clinical instructor effectiveness and their perceptions of learning in the clinical environment and to provide information nurse educators may utilize to facilitate learning in the clinical environment.

Procedure: The sample consisted of 83 female, senior baccalaureate nursing students from two private and two public universities. Bandura's Social Learning Theory was used as the conceptual framework. All students completed the Self-efficacy Questionnaire (SES), the T-Anxiety portion of Spielberger's State-Trait Anxiety Inventory (STAI-T), the Nurse Clinical Teacher Effectiveness Inventory (NCTEI) and the Stewart Evaluation of Nursing Scale (Stewart Scale). The SES was modified to include 13 items specific to nursing self-efficacy.

Data Analysis: Methods of analyses were correlation, multiple regression and t-tests for independent groups.

Findings: Analyses revealed that the variable most predictive of students' perceptions of learning in the clinical environment were their beliefs of nursing self-

efficacy. Significant correlations were also found between high levels of self-efficacy and higher perceptions of learning and between high levels of anxiety and lower perceptions of learning. No significant relationships were found between high levels of self-efficacy, low anxiety and perceptions of teacher effectiveness, nor were significant relationships found between perceptions of teacher effectiveness and perceptions of learning. Additionally, the best predictors of nursing self-efficacy were total self-efficacy and perceptions of learning. The best predictor of anxiety was nursing self-efficacy.

Conclusions: Variables in this study were shown to be valid predictors of perceptions of learning in the clinical environment. Nursing self-efficacy contributed most to students' perceptions of learning.

CHAPTER 1

INTRODUCTION

Nursing education traditionally includes both didactic and practicum components. The principal rationale for the clinical practicum is to provide an opportunity for students to demonstrate application of theoretical concepts to practice. Infante (1981) states, "nursing has established clinical laboratory activities as the heart of its program of study. They are indispensable. They are where students demonstrate their accomplishment of objectives" (p. 18).

The clinical practicum also serves as the primary means of nursing students' socialization to the role of professional nurse (TenBrink, 1968; Ondrack, 1975; Bradby, 1990a; Bradby, 1990b). While in the clinical area, students both interact with staff nurses, physicians and other health care professionals, and observe the interactions among staff nurses, patients and their significant others, and other health care providers. Through these experiences and observations, the role of professional nurse is learned both experientially and vicariously.

Students' personal characteristics of self-efficacy and anxiety have been demonstrated to affect the learning process (Bandura, 1977). Bandura argues that the student's concept of self-efficacy and level of anxiety may either hinder or facilitate learning. The presence of nursing students' anxiety and belief in their personal ability to succeed is well-documented (Orton, 1981; Davidhizar & McBride, 1985; Windsor, 1987; Pagana, 1988; Kleehamer, Hart & Keck, 1990; Hughes, 1992; Williams, 1993; and

Wilson, 1994).

Learning also occurs vicariously through the observation of others (Bandura, 1974, 1977, and 1979). For the nursing student, the primary role model is the clinical instructor (Rauen, 1974). The effects of the clinical instructor's behavior upon nursing students have been well-documented (Jacobson, 1966; Rauen, 1974; Wong, 1978; O'Shea & Parsons, 1979; Knox & Mogan, 1985; Mogan & Knox, 1987; Howie, 1988; Bergman & Gaitskill, 1990; Nehring, 1990; Hughes, 1992; and Wilson, 1994). Thus, for optimal learning in the clinical arena to occur, the presence of appropriate, effective clinical instructors serving as role models is vital.

Problem Statement

The problem of this study was to describe the relationships among baccalaureate nursing students' personal characteristics of self-efficacy and anxiety, their perceptions of clinical instructor effectiveness and their perceptions of learning in the clinical environment.

Statement of Purpose

The purposes of this study were to:

1. describe the relationships among baccalaureate nursing students' self-efficacy, anxiety, perceptions of clinical instructor effectiveness and their perceptions of learning in the clinical environment, and
2. to provide information nurse educators may utilize to facilitate learning in the clinical environment.

Rationale for the Study

Nursing students are thrust into an unfamiliar clinical environment, filled with changing activities, and expected to learn. During a clinical day, they must apply complex theoretical concepts and perform new psychomotor skills while administering nursing care to one or more assigned patients. Students also must learn judgement and decision-making skills while providing nursing care. They expect, and indeed should, receive guidance and direction from their teacher to assist them in navigating their way through the intricacies of the clinical environment.

Control of both learning situations and content in the didactic component is relatively easy to manage. The curriculum is developed by faculty and behavioral objectives are written for each class. Faculty then prepare instructional strategies best suited for the content to be taught. The practicum, or clinical component, however, presents the instructor with unique challenges. Not only is the clinical instructor responsible for arranging learning activities for students, he or she is also responsible for the safety and well-being of patients in the students' care. A level of risk is inherent in this situation as students are working with actual ill persons rather than providing care to "patients" in a simulated laboratory situation. Working with patients precludes the opportunity to correct most mistakes. For example, during dressing changes, sterility is either maintained, or the dressing is contaminated. When administering medications, the student either gives an accurate amount of the correct drug to the right patient via the correct route at the appropriate time, or an error occurs. The consequences of any error may result in a serious, or even fatal, outcome for the patient. Thus, anxiety is inherent in

the clinical arena for both students and faculty.

Additionally, the environment of the clinical setting is dynamic and ever-changing. The clinical instructor has little control over that environment, or the changes that occur. Often due to unique, diverse patient clinical presentations and courses of treatment, learning situations arise that cannot be repeated. This presents additional challenges for the clinical instructor (Jacobson, 1966; O'Shea & Parsons, 1979; Windsor, 1987).

Despite this emphasis on the practicum component of basic nursing education, usually there is little, or no, course work related to either didactic or practicum instruction in either master's or doctoral nursing programs. Therefore, the novice instructor is thrust into the education arena with little background for teaching. Most beginning nursing instructors have no opportunity to work with seasoned nurse educators before being expected to function in the role of clinical instructor. Consequently, "trial and error" are the primary means employed to learn role functions.

A variety of studies related to learning in the clinical arena have been conducted. Studies have included faculty behaviors or characteristics perceived as effective or ineffective (Barham, 1965; Jacobson, 1966; Mogan & Knox, 1987; Nehring, 1990; O'Shea & Parsons, 1979; and Wong, 1978), the most important faculty behaviors (Brown, 1981; Bergman & Gaitskill, 1990; and Knox & Mogan, 1985), the clinical teacher as role model (Flagler, Loper-Powers, & Spitzer, 1988; and Rauen, 1974) and unethical faculty behavior (Theis, 1988). Researchers have also investigated nursing students' perceptions of the totality of clinical experience (Windsor, 1987); general concerns (Williams, 1993);

anxiety producing aspects of clinical experience (Kleehammer, Hart & Keck, 1990; and Pagana 1988); and explanations of success or failure (Davidhizar & McBride, 1985). However, no studies have been identified that investigate the effects students' behaviors, or characteristics such self-efficacy, have upon their perceptions of clinical faculty effectiveness, nor explore effects of students' characteristics and perceptions of faculty effectiveness upon the students' perceptions of learning.

This study increases the knowledge base of nursing education by providing a greater understanding of the relationships among students' self-efficacy and anxiety, their perceptions of faculty effectiveness and students' perceptions of learning in the clinical arena. Additionally, this study provides nurse educators information to modify their own behavior so that they may be more facilitative of learning in the clinical environment. Findings of this study can be generalized to other disciplines in which a practicum component is used. These disciplines may include teacher education, dentistry, medicine and allied health.

Assumptions

Assumptions of the study were:

1. Subjects will answer questionnaires truthfully.
2. Subjects will read and write English.
3. The clinical environment will be viewed differently by each individual and some will consider it more stressful than do others.
4. Numerous interactions between students and faculty occur during the clinical practicum.

Research Question

One research question guided this study:

1. What are the relationships among baccalaureate nursing students' degree of self-efficacy, level of anxiety, perceptions of clinical instructor effectiveness and their perceptions of learning in the clinical environment?

Hypotheses

Hypotheses for this study were:

1. Baccalaureate nursing students with high levels of self-efficacy will report higher perceptions of learning in the clinical environment.
2. Baccalaureate nursing students with high anxiety levels will report lower perceptions of learning in the clinical environment.
3. Baccalaureate nursing students with high levels of self-efficacy and low levels of anxiety will perceive their clinical instructor as effective in the clinical environment.
4. Baccalaureate nursing students who perceive their clinical instructor as effective will report higher perceptions of learning in the clinical environment.

Definition of Terms

Conceptual and operational terms defined for this study were:

1. Total Self-efficacy: the individual's perception of his own effectiveness and ability to perform tasks (Bandura, 1977, 1978). In this study, self-efficacy was measured as the score on the Self-Efficacy Scale (SES) developed by Sherer, Maddux, Mercandante, Prentice-Dunn, Jacobs and Rogers (1982).
2. Nursing self-efficacy: the individual's perception of his effectiveness and ability to

fulfill the role of professional nurse and perform tasks specific to nursing. In this study, nursing self-efficacy was measured by researcher generated items added as a subscale to the SES by Sherer, et al. (1982).

3. Anxiety: an emotional state perceived as unpleasant and characterized by subjective feelings of nervousness, apprehension, tension and worry. The state is evoked when a person views a situation as potentially threatening or harmful to him. Anxiety was measured in this study by the state score on Spielberger's (1983) State-Trait Anxiety Inventory (STAI).

4. Clinical instructor: a registered nurse, employed by a university, and responsible for teaching baccalaureate nursing students in settings in which students provide care to patients.

5. Clinical instructor effectiveness: actions, activities, statements, and decisions of the clinical instructor viewed by baccalaureate nursing students as facilitating their learning in the clinical area (O'Shea & Parsons, 1979). In this study clinical instructor effectiveness was measured by the score on the Nursing Clinical Teacher Effectiveness Inventory (NCTEI).

6. Learning: baccalaureate nursing students' perceptions of the amount of knowledge gained, level of mastery of psychomotor skills, and acquisition of behaviors necessary to fulfill the role of registered nurse. In this study, learning was measured by the score on the Stewart Evaluation of Nursing Scale (Stewart Scale) completed by the subject.

7. Clinical environment: the setting of the health care agency(s) utilized for the

practicum component of required nursing courses in a baccalaureate nursing program.

8. Baccalaureate nursing student: female, who upon entry into the nursing program, did not hold a license to practice as a Registered Nurse (R.N.) or Licensed Practical Nurse (L.P.N.), was enrolled in 4000 level nursing course(s) in a college or university school of nursing approved by the National League of Nursing (NLN), and upon graduation, would receive the degree of Bachelor in Science with a Nursing Major, or Bachelor of Science in Nursing.

Limitations

Limitations identified for this study were:

1. The sample involved in the research was limited to one geographic area which may have decreased the generalizability of the data.
2. Subjects' ages, ethnicity and marital status may have influenced their self-efficacy and anxiety level.
3. Past experiences with faculty, in general, may have influenced subjects' perceptions of clinical instructor effectiveness.
4. Subjects' previous experiences with nurses may have influenced their perceptions of clinical instructor effectiveness.
5. Subjects' previous experiences in a health care setting may have influenced their self-efficacy and level of anxiety.
6. Past experiences with nurses may have influenced subjects' self-efficacy and anxiety level.

Chapter Summary

A vital portion of the professional nurse's education occurs in the clinical environment. During the clinical practicum, the nursing student is expected to apply theoretical knowledge, demonstrate critical-thinking and problem-solving abilities, perform new psychomotor skills, communicate therapeutically with patients and their significant others, and interact with their peers, clinical instructor and other health care providers. The clinical environment is never static and is anxiety provoking for both faculty and students. Many factors influence learning, including students' beliefs in their ability to accomplish a goal, anxiety level and the quality of available role models. This study investigated the relationships among self-efficacy, anxiety, nursing students' perceptions of clinical instructor effectiveness and their perceptions of learning in the clinical environment.

CHAPTER 2

REVIEW OF LITERATURE

Central to the program of study of several professions is a practicum component. These professions include education, nursing, medicine, allied health, and dentistry. In nursing, clinical experience has been referred to as "the heart of nursing's program of professional study" (Infante, 1981, p. 16). The clinical practicum provides a primary arena for student learning.

For the purpose of this research study, theoretical direction was provided by utilization of Social Learning Theory developed by Albert Bandura. Review of pertinent literature related to clinical instruction in nursing is also presented.

Conceptual Framework

Not only must a broad theoretical knowledge base be acquired, the nursing student must also become socialized to the role of professional nurse. Socialization to the role of professional nurse occurs primarily in the clinical area. It is within the clinical setting that the student develops critical thinking, practices psychomotor skills, and cultivates the self-concept of nurse.

In social learning theory, the accent is on an individual's interaction with the environment and learning by observation of others. As this research study investigated effects of clinical environmental factors on student learning outcomes, social learning theory was used to guide the research.

Socialization

Socialization is the process by which all aspects of a society are transmitted to its members so that they may learn appropriate behaviors for that particular group (Colucciello, 1990; Khan & Cangemi, 1979). The newcomer to a group is initiated "to the conduct, expectations, values, attitudes [sic] beliefs which will enable the individual to interact harmoniously with his fellows in a new environment" (Sheahan, 1980, p. 503). According to TenBrink (1968), socialization is based upon the concepts of self, role and identification. The element of personality that manages external and internal environments for an individual is the self. A role is a defined set of learned attitudes and behaviors which are designated by a specific element of society and portrayed by an individual in an assigned position and social situation. The manner in which the self assumes a new role is complex and is an interaction between the self and the role. This process involves identification, the process by which one either consciously or unconsciously patterns his behavior after another (TenBrink).

Socialization into a professional role has been described in different ways. TenBrink (1968) describes a process of choices that begins in childhood. This process includes the fantasy choice of the latency period in which a child selects an occupation that is readily visible. The tentative choice, occurring in adolescence, is the second stage when the choice becomes more concrete and provisional; and finally the realistic choice of the young adult (TenBrink). A tripartite process of socialization is also described by Simpson (1967). The first phase is "transition to task orientation" (Simpson, p. 48). During this process, the individual's concept of the occupation changes from that of a lay person "into

the technical orientations of the insider" (Simpson, p. 48). This is accomplished in the educational program by emphasis on prerequisite knowledge and professional skills necessary to assume the professional role. The second phase, "attachment to significant others in the work milieu" (Simpson, p. 50), begins when mastery of introductory knowledge and skills has been accomplished. Within this period, the individual develops an affinity for significant others who are in the work environment. Emphasis changes from application of knowledge and technical skills to "seeking acceptance as professional colleagues" (Simpson, p.52). In the final stage, "internalization of professional values" (Simpson, p. 52), the individual has fully assimilated values of the profession and the career becomes a significant issue. Esteem and evaluation of members of the profession are most significant to the individual. "Outsiders are not judged competent to evaluate the work of the profession, and little reliance is placed on their opinion" (Simpson, p. 52).

Ondrack (1975) postulated that socialization was linked to consistency between attitudes and values of significant others encountered in a professional school during the educational process. Results of this study demonstrated that the effect of attitudes and values of significant others (faculty and staff) was significant. When there were few differences between attitudes, values and behaviors of significant others, graduates exhibited behaviors indicating positive socialization. The inverse of this was also true (Ondrack).

In nursing, the socialization process is complex. It occurs at a myriad of levels and numerous aspects of the process are neither stated nor acknowledged (Christman, 1991; Dorcy, 1992; Wilson & Startup, 1991). The neophyte must be introduced to behaviors

that are acceptable in the practice of professional nursing (Olsson & Gullberg, 1987; Roch, 1980; and Sheahan, 1980). Throughout their tenure in a nursing program, nursing students must learn theoretical concepts, develop professional behaviors and attitudes, and master psychomotor skills.

"Socialization brings nurses into *existence*" (Colucciello, 1990, p.17). The nursing student is immersed in learning required theoretical concepts, skills and acquiring a new image (Colucciello).

> The journey into socialization of the nursing profession can be likened to integration and assimilation of experiences that are continually being extracted from the social system. This synthesis facilitates assimilation of various perspectives and professional characteristics, enhancing development of a rather comprehensive world view of nursing's mores, values, and culture (Colucciello, 1990, p.19-20).

At the end of the journey, the student has developed the self-concept of "nurse" and the culture of nursing is perpetuated (Colucciello).

Socialization into nursing has been described by Bradby (1990a, 1990b) as a series of "status passages".

> A status passage includes the anticipations and anxieties experienced prior to the event. This may be accompanied by some preparations such as asking about the rights and obligations associated with this new position, actually making an attempt to experience it to some extent, or gaining work experience in a similar work setting. At the same time, there has to be a 'letting go' of some aspects of a previous status. . . (Bradby, 1990a, p. 1220).

Status passages described by students in Bradby's study included moving away from home, adjusting to new study habits and teaching strategies, the academic challenge of difficult concepts, learning new psychomotor skills, and being plunged into the practical world of patient care. As a nursing student progresses through the socialization process, new experiences are compared with previous ones and any changes are noted. Often, during this time, the student experiences a sense of bewilderment and of being overwhelmed (Bradby, 1990a).

The purpose of the clinical component of nursing education is to provide the student with opportunities to apply theoretical concepts to practice and to develop those behaviors necessary to assume the role of professional nurse. In meeting these objectives, the nursing student both participates in, and observes, a myriad of interactions between individuals. Students observe the instructor, nursing staff, peers, and other health care providers performing numerous procedures. According to Iwasiw and Goldenberg (1993) these experiences provide the student with an opportunity to learn by both direct and vicarious means.

Social Learning Theory

Social Learning Theory (SLT) has its roots in behaviorism (Bandura, 1974, 1977, 1978; Bandura & McDonald, 1963; Grusec, 1992; Merriam & Caffarella, 1991; and Stuart, 1989). Concepts from the cognitivists' and humanists' orientation have also been incorporated into this paradigm (Merriam & Caffarella, 1991). Although these theories provided the base for Bandura's social learning theory, the emphasis in the SLT paradigm is upon the interaction of the individual and the environment and learning by observation

of others (Bandura 1974, 1977, & 1978). Bandura argues that individuals are neither propelled by internal forces nor battered about by stimuli in the environment. Bandura explains behavior as a "continuous reciprocal interaction of personal and environmental determinants. Within this approach, symbolic, vicarious, and self-regulatory processes assume a prominent role" (1977, p. 10-11). Learning occurs primarily in the social setting (Khan & Cangemi, 1979; Merriman & Caffarella, 1991) and vicariously from observation of others (Bandura, 1977). The individual learns not only socially acceptable behaviors, but also those behaviors that are socially unacceptable to the group (Bandura 1977; and Khan & Cangemi).

Modeling is a predominant concept in social learning theory. Bandura (1977) states that most learning occurs through observation of others. Learning by observation is not only more expedient but also more innocuous than relying solely on one's own performance. Indeed, the more hazardous the consequences of the behavior, the more important is observational learning.

> Because mistakes can produce costly, or even fatal consequences, the prospects for survival would be slim indeed if one could learn only by suffering the consequences of trial and error. For this reason, one does not teach children to swim, adolescents to drive automobiles, and novice medical students to perform surgery by having them discover the appropriate behavior through the consequences of their successes and failures (Bandura, 1977, p. 12).

The influence of role modeling has been demonstrated in general education (Bova & Phillips, 1984; Clark & Zimmer, 1989; and Rachman, 1972) and nursing education (Bradby, 1990a; Bradby, 1990b; Kelly, 1992; Lewin & Leach, 1982; Nelms, Jones, & Gray, 1993; Wong, 1978).

The influence of modeled behavior is contingent upon the following: attentional. retention, motor reproduction, and motivational processes (Bandura, 1977). Unless the individual is attentive to and accurately perceives vital aspects of the modeled behavior, little will be learned from observation of that behavior. "Attentional processes determine what is selectively observed in the profusion of modeling influences to which one is exposed and what is extracted from such exposures" (Bandura, 1977, p. 24). Characteristics of both observer and model influence attentional processes. Regular association with a particular cohort exposes the learner to behavior that is observed repeatedly, hence enhancing learning. Models who are perceived as pleasant and are highly regarded by the learner attract more of the observer's attention. The capability of the observer to process information also influences the amount of learning that occurs (Bandura, 1977; and Perry, 1988).

If the observed behavior is to be of benefit, it must be remembered. Retention processes are the second essential component of observational learning (Bandura, 1977). Observed behavior patterns must be translated into symbolic form and retained in memory. Both imagery and verbal systems are involved in coding and retaining the observed behavioral patterns. "Sensory stimulation activates sensations that give rise to perceptions of the external events. As a result of repeated exposure, modeling stimuli eventually produce enduring, retrievable images of modeled performance" (Bandura, 1977, p. 25). Since most cognitive processes regulating human behavior are verbal, verbal coding enhances the acquisition and retention of observed actions. Mental rehearsal of the behavior also facilitates memory and actual performance of the behavior (Bandura).

Motor reproduction processes constitute the third component of modeling (Bandura, 1977). In this phase, symbolic representations are transformed into appropriate actions. Initially, when the behavior is to be enacted, "responses are selected and organized at the cognitive level" (Bandura, 1977, p. 27). If the learner possesses the necessary skills to perform the behavior, it will be enacted. However, if some necessary skills are missing, the performance will be defective. Rarely are the actions performed initially without error and these errors provide information for correction. However, the performer cannot directly observe his own behavior and must therefore rely upon feedback. This feedback may be vague descriptions from others or his own kinesthetic cues. When actions are not fully observable, it is difficult both to identify and guide needed adjustments (Bandura). "In most everyday learning, people usually achieve a close approximation of the new behavior by modeling, and they refine it through self-corrective adjustments on the basis of informative feedback from performance and from focused demonstrations of segments that have been only partially learned" (Bandura, 1977, p. 28).

All behaviors that are learned may not be performed; therefore, a distinction is made between acquisition and performance in social learning theory (Bandura, 1977). An individual is more likely to employ a modeled behavior if it is regarded as having valuable and positive outcomes. Others' reactions to the modeled behavior provide the learner with cues about the behavior. These observed consequences serve as motivational processes and influence the performance of modeled behaviors (Bandura).

Another pertinent issue in observational learning is that of reinforcement (Bandura, 1977). From the viewpoint of social learning theory, reinforcement does indeed play a

role in learning. However, the influence of reinforcement is primarily "an antecedent rather than a consequent influence. Anticipation of reinforcement is one of several factors that can influence what is observed and what goes unnoticed" (Bandura, 1977, p. 37). Reinforcement is considered to be more of a facilitator of learning than a necessary component, for factors other than the consequences of the response may influence the attentiveness of the observer. According to Bandura, research has shown that individuals demonstrate the same amount of observational learning regardless of whether prior information was given that correct imitations of the behavior would be rewarded, or if learners were given no prior inducements to learn the behavior. "Social learning theory, however, encompasses a broader range of reinforcement influences including external, vicarious, and self-generated consequences" (Bandura, 1977, p 38-39).

Transmission of new information is the primary purpose of modeling and this is done in a variety of ways: verbally, by actual physical demonstration, and by graphic portrayal (Bandura, 1977). Verbal transmission is the preferred mode to guide behavior, for words can often convey an innumerable assortment of behaviors which would be both awkward and time-consuming to transmit by actual demonstration. Development of television and other visual media has also provided additional means of modeling behaviors. Visual and printed media are of major significance in transmitting modeled behaviors due to their multiplicative power. Now, new behavioral patterns may be simultaneously dispersed to unlimited numbers of people by a single model (Bandura).

Although the modeling process is essentially the same regardless of how the behaviors are conveyed, verbally, pictorially or by actual demonstration, results of

modeling are not equally effective (Bandura, 1977). Some models may command more attentiveness from the observer than others. Other behaviors may be more easily portrayed by use of live demonstration. Also, if the learner's conceptual and verbal skills are not adequately developed, learning may be more enhanced by demonstration rather than the use of spoken or printed words (Bandura).

More than new thoughts or patterns of conduct are learned by modeling (Bandura, 1977). Previously learned behavioral inhibitions can be reinforced or made ineffective by observation of consequences others receive when the behavior is enacted. Fear may be reduced, attitudes changed and defensive behavior lessened when one observes another who does not suffer harmful repercussions as a result of actions that are anxiety provoking for the observer. Also, conduct of others may provide the observer with cues that elicit previously learned behavior that is appropriate for that situation. This is defined as "response facilitation" by Bandura (1977), and is distinguished from observational learning as the other's behavior does not transmit new information, it merely serves as social prompts.

Most events that occur within the environment are accompanied by certain patterns (Bandura, 1977). The phenomena accompanying these events are defined as "antecedent determinants" by Bandura. Antecedent determinants may evoke both physiologic and emotional responses. The relationship between the phenomenon and accompanying patterns may be learned by direct or vicarious experience. As relationships between incidents and antecedent determinants are learned, one becomes able to foretell, with varying precision, forthcoming events. Cues within the environment signal coming

events or indicate likely outcomes of particular behaviors. Eventually, this collection of stimuli guides and directs the individual's behavior. Events that are feared and behavior likely to produce punishment are avoided, whereas those phenomena with pleasant associations are sought out (Bandura).

From the viewpoint of social learning theory, learning also occurs as a result of consequences that follow actions of an individual or individuals (Bandura, 1977). These phenomena are defined by Bandura as "consequent determinants". An individual's behavior is guided both by observing the consequences of others and by consequences produced by his own behavior. Reinforcement of consequences serves to maintain behavioral changes made as a result of the effects of the conduct. Reinforcement may be external, vicarious or self-produced (Bandura).

While antecedent and consequence determinants are important ingredients of the learning process, they do not fully explain human behavior (Bandura, 1977). Cognitive control also determines ways in which events will be observed and perceived. Also, cognitive mediation determines the importance of these incidents, retention of any effects from the events, organization of information transmitted, and how this information will be utilized in the future (Bandura).

Self-regulation and self-efficacy are other important constructs of social learning theory (Bandura, 1977, 1979; Grusec, 1992). If behavior is to change, Bandura postulated that first corrective learning must occur: ". . .change is mediated through cognitive processes, but the cognitive events are induced and altered most readily by experiences of mastery arising from successful performance" (1977, p. 79). However,

changes in behavior are not made frivolously, nor does the person vacillate in a multitude of directions. Often an individual will retain beliefs even in the face of change due to self-regulation. An individual judges his own behavior and the given situation. If the behaviors uphold the individual's internal standards, actions are evaluated positively; however, if internal standards are not met, the result is a negative evaluation (Bandura, 1977; and Grusec, 1992). "The source of self-regulative functions lies in modeling and in direct tuition" (Grusec, 1992, p. 782). Individuals do not passively adopt behavioral standards held by others. All modeled behavior is evaluated according to the situation and the individual who performs the actions. Information is integrated and the individual develops his own standards of behavior (Brown & Schulte, 1987; and Grusec, 1992).

Self-regulation is also influenced by self-efficacy, the individual's perception of his own effectiveness and ability to perform tasks (Bandura, 1977, 1978). This influences that which an individual will attempt and the amount of effort he will expend to learn the behavior. An individual who has a negative self-efficacy perception may become preoccupied with himself and aroused emotionally. This creates distraction and hinders an effective performance (Bandura, 1977, 1978; and Grusec, 1992, and Tedesco, 1986). If the individual's self-efficacy perception is positive, more complex tasks may be attempted and learning enhanced (Bandura, 1977, 1978; Brown & Schulte, 1987; Perry, 1988; and Rosenstock, Strecher, & Becker, 1988).

> Beliefs about self-efficacy arise from the individual's history of achievement in a domain, from observation of what others are able to accomplish, from attempts of others to mold feelings of self-efficacy through persuasion, and from consideration of one's own physiological state during a task as a reflection of personal capabilities and limitations (Grusec, 1992, p. 782).

"From the social learning perspective, psychological functioning is a continuous reciprocal interaction between personal, behavioral, and environmental determinants" (Bandura, 1977, p. 194). This interaction is designated "reciprocal determinism" (Bandura, 1977, 1978). Learning does not take place as a result of an isolated event. Environmental conditions and the behavior of others have an impact upon the individual's behavior, and vice versa; thus personal and environmental influences are interdependent. Accomplishments "result from reciprocal interaction of external circumstances with a host of personal determinants, including endowed potentialities, acquired competencies, reflective thought and a high level of self-initiative" (Bandura, 1977, p. 207).

Clinical Instruction

There is an abundance of literature related to the practicum component of various disciplines such as education, nursing, medicine, pharmacy, dentistry and allied health. Indeed, there is a plethora of information related to nursing education alone. For the purpose of this study, the literature review was limited to that which is specific to clinical instruction in nursing education. Within this body of knowledge, two categories of factors influencing student learning outcomes in the clinical arena were identified: faculty behaviors and students' perceptions of the clinical experience. These categories served as the organizing framework for presentation of this portion of the literature review.

Faculty Behaviors

Studies related to faculty behavior compose the largest subgroup of literature related to clinical instruction. Students from diploma and associate and baccalaureate degree nursing programs have participated in these studies. Associate and baccalaureate

degree programs included those affiliated with both public and private universities.

The purpose of Jacobson's (1966) study was not only to identify effective and ineffective nursing faculty behaviors but also to determine effects of the behaviors upon students' motivation to teach nursing. A modified form of critical incident technique was used for data collection. Jacobson collected 1,182 usable incidents of effective and ineffective faculty behaviors from 961 undergraduates in five baccalaureate nursing programs. Incidents described included those occurring both in the classroom and clinical arena.

Four principal null hypotheses were tested. They were:

1. The proportion of negative critical incidents will be positively related to the students' desire to teach.
2. The proportion of negative critical incidents will increase as the number of students to clinical faculty increases.
3. The preparation level of teachers will not be related to their effectiveness classification.
4. The level of the students according to year will not be related to the proportion of negative critical incidents (Jacobson, 1966. p. 220).

Data were collected by means of group interviews of 5 to 80 students and by having individual students write, in a 50-minute time period, descriptions of as many effective and ineffective incidents as possible. More effective incidents were recorded than ineffective incidents. Hypotheses one, two and four were not supported. When data from all schools were grouped, there was evidence to support the third hypothesis. However, when data were grouped by individual school and grade level, this hypothesis was rejected. Six major categories of faculty behaviors were identified: availability to students, apparent general knowledge and professional competence, interpersonal relations with students and others, teaching practices (mechanics, methods, skills) in classroom and clinical areas,

personal characteristics and evaluation practices. Fifty-eight specific criteria for effective teaching were identified and grouped according to identified categories (Jacobson, 1966).

Wong (1978) also used critical incident technique to identify faculty behaviors in the clinical environment students perceived as facilitating or hindering learning and to determine if there was a difference in perceptions between first and second year students. Eight students enrolled in an associate degree program in Ontario were asked to write descriptions, during a 45 minute period, of as many incidents as possible within the past six months that they perceived had helped or hindered their learning in the clinical area. Data analysis indicated that first year students were more sensitive to how faculty made them feel, while second year students were more concerned with the teaching competence of faculty. Behaviors identified may be assigned to similar categories identified by Jacobson (1966). Specific examples of behaviors that facilitated learning included: being amenable to answer questions and provide explanations, being respectful of students, available when needed, and keeping students informed of their progress. Behaviors hindering learning included: use of sarcasm, intimidation, emphasizing only mistakes, and ridiculing students (Wong, 1978).

Many studies related to behavior of the clinical instructor have included both faculty and students in samples (Barham, 1965; Bergman & Gaitskill, 1990; Brown, 1981; Mogan & Knox, 1987; Nehring, 1990; and O'Shea & Parsons, 1979). Like Jacobson (1966) and Wong (1978), Barham (1965) utilized critical incident technique to identify behaviors that distinguish effective and ineffective nursing faculty. Thirteen associate degree programs served as sites for data collection. Three hundred sixty-two written

critical incidents were collected from 12 program directors, 64 instructors, 52 first year students and 50 second year students participating in the study. Incidents included descriptions of behaviors occurring in both classroom and clinical environments. Meaningful behaviors were extracted, written on 5" X 8" cards, and coded as effective or ineffective. Two nurse educators served as judges to establish validity of category assignment. Nineteen critical behaviors were identified but there was no agreement among the four groups as to which behavior was most critical. However, "showing restraint so that own anxiety does not influence situation" (Barham, 1965, p. 67) was ranked either first or second by all groups.

> If a description of effective teaching behavior was given for the nursing instructor in the associate degree program in nursing from these responses, it would be concluded that effective teaching behavior is demonstrated by the individual who does not let his anxiety influence a situation, who recognized his limitations, who demonstrates understanding in working with students by being available whenever the student finds himself in a situation that he is unable to handle alone, whose explanations are understandable, and who has the ability to stimulate the students to want to learn (Barham, 1965, p. 68).

These behaviors could be assigned to some of the categories identified by Jacobson (1966). However, neither faculty nor students in Barham's study described behaviors related to evaluation practices as did subjects in previous studies (Jacobson, 1966; and Wong, 1978).

O'Shea and Parsons (1979) also investigated similarities and differences between faculty and student perceptions of faculty behaviors resulting in meaningful student outcomes. Twenty-four nursing faculty members and 205 baccalaureate nursing students (104 juniors and 101 seniors) at a private university were asked to list on cards provided,

three to five instructor behaviors that facilitated and three to five behaviors that hindered learning in the clinical area. When the total number of responses for each group, per category, were tallied, more assistive behaviors than interference behaviors were identified. Responses were sorted into three broad categories: evaluative behaviors, instructive/assistive behaviors, and personal characteristics. Within the category of evaluative behaviors, both positive and honest feedback were identified by faculty and students alike as facilitating learning. O'Shea and Parsons (1979) also investigated similarities and differences between faculty and student perceptions of faculty behaviors resulting in meaningful student outcomes. Instructor availability was identified by both groups as the primary instructive/assistive behavior facilitating learning. The primary disagreement between faculty and students was found in the instructive/assistive category. Within this category, role modeling was listed as a facilitative behavior five times as often by faculty as by students. O'Shea and Parsons suggested this may be a result of faculty's perception of the totality of the nursing role while students' perceive only parts of the role at a time. "Having unrealistic expectations, meeting their own needs first and 'taking over' assignments from the students" (O'Shea & Parsons, 1979, p. 414) were identified by faculty, but not students, as interfering with learning. This may be indicative of faculty's feelings of role conflict often experienced in the clinical area (O'Shea & Parsons, 1979). The clinical instructor fulfills many roles during the clinical experience: student counselor, teacher, liaison between health care facility and school, and practitioner (Wong & Wong, 1987). These data may also indicate faculty's struggle in determining if priorities lie with the students, patients, staff or others (O'Shea & Parsons, 1979).

Although effective and ineffective teaching behaviors had been identified by others (Barham, 1965; Jacobson, 1966; O'Shea & Parsons, 1979), Brown (1981) sought to determine which of those behaviors were believed by nursing faculty and students to be most important and if there was a difference in perceptions between the two groups. Brown developed a questionnaire by utilizing behaviors identified from the literature. Content validity was established by having graduate nursing students and faculty evaluate the instrument; revisions were made accordingly. There was no discussion of the method used to establish reliability. Section I of the questionnaire consisted of 20 characteristics of teachers. Participants were asked to rank each item for importance using a 5-point Likert scale ranging from "of most importance" to "of no importance". In Section II, participants were to choose from the list five characteristics they considered to be most important and rank these in order of importance. The sample consisted of 82 senior nursing students and 42 faculty members from a southern university baccalaureate program (Brown, 1981).

Simple frequency, percentages and Chi square were used for data analysis (Brown, 1981). First, data were analyzed by calculating percentages for the response by groups for each item in Section I. Data were then horizontally collapsed to further determine the importance of each item and any difference between groups. Chi square was used to determine if there was any significant difference in responses between groups. Findings indicated that the faculty/student relationship was considered by students to be more important than professional competence. However, for faculty, professional competence was more important. A significant difference ($p \leq .05$) was identified between groups on

the importance ratings of four items. "These items included: relates underlying theory to nursing practice; supervises and helps in new experiences without taking over; is self-controlled, cooperative, and patient; and permits freedom of discussion and venting of feelings" (Brown, 1981, p. 11).

In 1990, Bergman and Gaitskill replicated Brown's (1981) study. The number of subjects in this study (N=143) was greater than that of Brown (N=82). In addition to using hypotheses from Brown's study, Bergman and Gaitskill (1990) also proposed that students' perceptions of positive faculty behaviors would become more similar to faculty perceptions as students' level of nursing education increased. Data were analyzed using the same statistical measures as Brown (1981). Contrary to Brown's findings, both students and faculty identified the student/faculty relationship as most important. The hypothesis that as they progress through the program, student perceptions of effective behaviors would begin to resemble faculty perceptions was partially supported. As students' experience increased, patient care and instructor feedback became more important, however, students did not view this as important as did faculty. Sophomore students were more concerned about working with faculty who had realistic student expectations. Although faculty regarded this as important, they rated it less important than did students (Bergman & Gaitskill, 1990). Although there are some differences in findings between these studies (Brown, 1981; and Bergman & Gaitskill, 1990), there is a relatively high degree of congruency which increases generalizability of both studies.

Using a researcher generated questionnaire, Knox and Mogan (1985) investigated the importance of effective faculty behaviors. Teacher behaviors were grouped into five

categories: "evaluation, interpersonal relationship, nursing competence, personality, teaching ability" (Knox & Mogan, 1985, p. 27). A seven-point Likert scale was used to rate each of 47 items on the questionnaire. Instrument reliability and validity were established by means of pilot testing with nursing faculty and students. Unlike earlier studies using only students, or faculty and students, in evaluating faculty behaviors, Knox and Mogan included a random sample of practicing baccalaureate (BSN) graduates. Distribution of the three groups was as follows: 49 university nursing faculty, 393 students enrolled in all four years of the nursing program, and 45 BSNs. Nursing faculty and students were affiliated with one university; BSNs were from communities in British Columbia. Evaluation was ranked as the most important category by all respondents except first year students. Knox and Mogan suggest that this difference may be attributed to first year students' lack of experience with summative clinical evaluation. Personality was ranked by all groups as least important. Variance among groups was found for the rankings of interpersonal relationship, nursing competence and teaching ability. Students tended to rank interpersonal relationship higher than teaching ability and nursing competence. Faculty and graduates rated nursing competence and interpersonal relationship higher than teaching ability (Knox & Mogan, 1985). The importance of evaluation is congruent with the findings of Brown (1981) and O'Shea and Parsons (1979). Interpersonal relationship was also considered to be of significant importance by Brown (1981). Findings related to the relative unimportance of personality are comparable to those of Brown (1981) and O'Shea and Parsons (1979).

In 1987, Mogan and Knox used their previously developed questionnaire (Knox &

Mogan, 1985) for a similar but different purpose. The Nursing Clinical Teacher Effectiveness Inventory was used to identify "best" and "worst" characteristics of clinical nursing faculty. The purpose of the study was to provide clinical faculty a list of characteristics of "best" and "worst" teachers so that they might develop or strengthen positive behaviors and reduce or avoid negative behaviors. Seven university schools of nursing were used as sites for data collection and 201 subjects (173 undergraduate students and 28 clinical nursing faculty) participated in the study. Second, third and fourth year students were included in the sample. First year students were excluded due to lack of clinical experiences. For each of the "best" and "worst" characteristics, the mean and standard deviations were calculated for both students and faculty. Then the 10 highest ranked "best" characteristics by both students and faculty were compared. Similar comparisons were made for the 10 lowest characteristics ranked as "worst" (Mogan & Knox, 1987). Both students and faculty rated being a good role model as the highest of the "best" characteristics and the lowest of the "worst" characteristics. There were similarities in students and faculty perceptions of the highest ranked "best" characteristics but less agreement between the two groups in ranking of "worst" characteristics.

Of note, is the divergence between groups on items related to interpersonal skills and nursing competence (Mogan & Knox, 1987). Students tended to rank items related to interpersonal skills higher than those related to nursing competence. The inverse of this was true for faculty (Mogan & Knox, 1987). These findings are consistent with those of Brown (1981).

This study (Mogan & Knox, 1987) was replicated by Nehring (1990). Although

the sample size of Nehring's study (N=184) approximated Mogan and Knox's sample (N=201), the composition of the sample differed, as more faculty (N=63) and fewer students (N=121) participated in Nehring's study. Mogan and Knox included second, third, and fourth year students whereas all students in Nehring's study were seniors. Also, both generic and Registered Nurse (R.N.) students were included in Nehring's sample, however no R.N.s participated in Mogan and Knox's study. Findings of Nehring's study were similar to those of Mogan and Knox. Both faculty and students perceive the "best" clinical teacher to be one who "is a good role model, encourages mutual respect, and provides support and encouragement" (Nehring, 1990, p.938) and who is approachable and does not belittle a student when correcting the student's mistakes. "Worst" faculty rarely engage in these behaviors (Nehring, 1990). Nehring did not separate student data into generic and R.N. student groups. The effect of the R.N.s practice experiences prior to their entry into the role of baccalaureate student may be an extraneous variable influencing their perceptions of faculty characteristics. Similar findings of this study (Nehring, 1990) further validate reliability and validity of the Nursing Clinical Teacher Effectiveness Inventory.

Two studies specific to the clinical instructor as role model were identified (Flagler, Loper-Powers, & Spitzer, 1988; and Rauen, 1974). According to Rauen (1974) the clinical instructor fulfills three primary roles: person, nurse and teacher. Of these, the instructor's modeling of behaviors related to the role of nurse was identified by diploma students (N=84) in her study as being the most important element in role socialization (Rauen, 1974). The importance of the clinical instructor's influence upon the student's

development of self-confidence as a nurse is confirmed by Flagler, Loper-Powers, and Spitzer (1988).

Unethical behavior by faculty is rarely addressed by researchers. Indeed, only one study related to this topic was identified (Theis, 1988). Also of note, of all researchers investigating faculty behaviors, only Theis utilized a conceptual framework to lend direction to the research. A portion of the American Association of University Professors' Statement on Professional Ethics was used as a basis for the conceptual framework. "This statement deals with the professor's ethical obligations as teacher and reflects three basic moral principles: Respect for persons; Justice; and Beneficence" (Theis, 1988, p. 103). An unstructured, written questionnaire was used to gather qualitative data for use in developing an instrument to measure types of unethical faculty behaviors, frequency of occurrence and the extent to which students found the behaviors problematic. Two hundred and four senior baccalaureate nursing students from one public and two private universities participated in the study. A total of 216 examples of unethical teaching behaviors was reported by 167 participants. Thirty-four participants indicated that they had not encountered unethical behaviors. Of the events described, "107 (50%) occurred in the clinical setting, 84 (39%) in the classroom, eight (3%) involved administrative concerns, and 17 (8%) could have occurred in either the classroom or clinical area" (Theis, 1988, p. 103). Only 6% (14) of events involved non-nursing faculty. Respect for persons was the category in which most violations of ethical principles occurred. Frequency of violations of ethical principles related to justice and beneficence were rated second and third, respectively. Theis admonishes that results must be viewed with caution

as these were students' perceptions and that some faculty behaviors may have been misinterpreted (Theis, 1988). Unethical behaviors occurring in any venue are of concern to nursing faculty. However, the preponderance of clinical occurrences is of special concern. Not only is the student/faculty interaction negatively affected but the quality of patient care is also diminished.

Student Perceptions of the Clinical Experience

Although many studies have addressed the clinical experience in nursing, few have addressed the experience from students' viewpoint. Gaining a better understanding of the clinical experience from the viewpoint of the student was the purpose of Windsor's (1987) study. Research questions addressed students' perceptions of tasks performed, what was learned, factors facilitating and hindering learning, what made a good or bad clinical day, and what students worried about during the clinical experience. Naturalistic inquiry was the methodology used for the study. Nine baccalaureate students were interviewed twice. Data collection continued until data saturation was reached. Findings indicated that much learning occurred during the clinical experience. Primary categories of learning were sorted as psychomotor skills, time management and socialization to the role of nurse. Factors facilitating or hindering learning included student preparation, instructor characteristics, patient traits, and variety of assignments. Aspects of a good clinical day included providing good patient care, patient rapport, and peer, staff, and instructor approval. Poor patient care, instructor or staff criticism and personal problems contributed to a bad clinical day. Students worried most about the quality of patient care they provided and obtaining approval from the staff and instructor (Windsor, 1987).

Three stages of student development were also identified (Windsor, 1987). The first stage was typified by student anxiety and obsession with procedural rules. Students experienced much self-doubt and were very dependent upon the clinical instructor. During the second stage, although less obsessed with performance of psychomotor skills, students struggled to assume the identity of professional nurse. In the final stage, students exhibited more self-confidence, were less dependent upon the instructor, and were comfortable performing nursing tasks (Windsor, 1987).

Lazarus's theory of cognitive appraisal of stress served as the conceptual framework for Pagana's (1988) investigation of aspects of the clinical experience that students found challenging or threatening. Pagana stated that reliability and validity of the researcher created Clinical Stress Questionnaire were established and that the process by which these were established was reported in detail elsewhere. A total of 262 sophomore and junior baccalaureate nursing students, from seven colleges and universities, who were in their first medical-surgical clinical rotation participated in the study. Possible responses to the question related to the amount of stress experienced varied from 0 (no stress) to 4 (a great deal). The mean score of responses to this question was 2.7 (SD=.91), indicating the experience was perceived as stressful. When a t-test was used to identify any significant difference between the mean threat (2.26) and challenge (2.50) scores, results indicated that students were more challenged than threatened (t=3.32, $p \leq .001$). However, responses to open-ended questions revealed more threatening aspects than challenging ones. Six primary topics of threat were identified: "personal inadequacy, fear of making errors, uncertainty, the clinical instructor, being scared or frightened, and fear of failure"

(Pagana, 1988, p.418).

Williams (1993) and Kleehammer, Hart, and Keck (1990) also investigated students' concerns about the clinical experience. However, the methodologic design of both studies contained flaws which cause one to question generalizability and validity of the studies' findings. Williams identified maintaining adequate grades, fear of mistakes in patient care, and acquiring knowledge as primary student concerns. Factor analysis yielded the following elements: support and guidance, learning, language and communication, clinical, financial, loneliness, family, and miscellaneous concerns. When selected demographics were correlated (Pearson's correlation coefficient) with concern factors, being Asian and being single demonstrated a high positive correlation with concern in clinical, learning, guidance, language and social issues. Williams' sample size (N=245) was adequate. However, 23% of the subjects were Asian and 2.5% African-American (Williams, 1993). Demographic data correlated to ethnicity and marital status were not presented. The study was conducted at five campuses of a large university system in a western state. Due to increased Asian population in the west, this sample may be representative of the population of that particular area but may not represent the total population on nursing students. Therefore, the generalizability of the study is diminished.

Kleehammer, Hart and Keck (1990) investigated baccalaureate nursing students' perceptions of the amount of anxiety within different clinical situations. However, only studies of diploma students were presented in the literature review. One wonders if there would be a difference in perceptions between the two groups of students. The Clinical Experience Assessment Form, developed by the investigators, was the tool used for data

collection. There was no discussion of how, or if, reliability and validity of this tool were established. Also, all subjects did not receive equal treatment. An open-ended question was added to the tool when it was administered to the last 59 subjects. Data collection procedures were unclear. Kleehammer, et al. state that data collection took place over a four year period and that data were collected during the second semester of the school year. Yet, only two groups, juniors and seniors, were utilized for data analysis. If data collection took place over four years, students may have participated in the study both as a junior and a senior. This would affect results as differences in anxiety between junior and senior students have been documented (Windsor, 1987).

Only one study investigating students' explanations of success or failure in the clinical experience was identified (Davidhizar & McBride, 1985). Weiner's attribution theory served as the conceptual framework for the study. One hundred ninety-one students, both male and female, from all three levels of one Midwestern diploma program participated in the study. A tool developed by the investigators was used for data collection. No discussion of psychometric evaluation of the tool was presented. Using a nine-point Likert scale, students were asked to rate how successful (1=not successful, 9=successful) they felt in both delivery of nursing care and mastery of theory. Following this, they were asked to indicate on a nine-point importance scale (1=no importance, 9=great importance) the amount each of four reasons (personal effort, ease of task, luck and ability) accounted for their success in the course they had just finished. Results revealed that, overall, students perceive themselves as successful in providing nursing care and mastery of theory. In order of rank, students cited effort, ability, task ease and luck to

explain their successes. In response to an open-ended question, the course instructor was cited most often as the most significant reason for success. "Qualities of the instructor that were most related to success involved: (a) availability, (b) positive personality traits, and (c) knowledge" (Davidhizar & McBride, 1985, p. 287). Failure was primarily explained by external causes. In order of citation by students, failure in nursing care and mastery of theory was attributed to task difficulty, bad luck, low effort, and low ability. When asked to list factors contributing to failure in the course just completed, the instructor was cited frequently. "Qualities of the instructor most related to failure were (a) lack of skill in presentation, (b) lack of knowledge, and (c) lack of positive personality characteristics" (Davidhizar & McBride, 1985, p. 288). However, staff characteristics were the greatest number of attributions cited in explaining failure in nursing care (Davidhizar & McBride, 1985). Staff influence on student learning outcomes was also documented by Orton (1981).

Chapter Summary

According to social learning theory, most learning occurs in a social setting and is a result of the interaction of personal characteristics of the learner and elements of the environment. Observational learning and role modeling are inherent in the learning process. Characteristics of role models may enhance or hinder learning. Role models that are held in high esteem by the learner may attract more attention and thus, facilitate learning. Learning occurs both through direct experience and vicariously. Investigators have utilized elements of social learning theory to investigate the learning process in the disciplines of psychology (Bandura & Jeffery, 1973; and Bandura & McDonald, 1963)

education (Lange, 1971) and nursing education (Callery, 1990; and Iwasiw & Goldenberg, 1993).

In nursing education, the clinical arena is a vital portion of the social setting in which the student develops critical thinking and psychomotor skills, applies theoretical concepts to practice and develops the self-concept of professional nurse. Actors in the clinical environment, nursing staff, patients, other health care providers, the student's instructor and peers, provide the student with innumerable opportunities for observation of their behaviors and set the tone for the organizational climate. The importance of effective role models in the clinical setting has been well-documented (Bradby, 1990b; Bidwell & Brasler, 1989; Hadley, 1967; Howie, 1988; Lewis & Deans, 1991; Nelms, Jones & Gray, 1993; and Wong, 1978). Interaction of the student and the social setting may both facilitate and hinder learning.

Although students and faculty from diploma and both associate and baccalaureate programs participated in studies discussed, no significant differences in perceptions were apparent among educational levels. The significance of the student/faculty relationship and its effect on learning outcomes was readily apparent. Hughes (1992) documented a nursing student's vulnerability to uncaring instructor conduct and dependence upon faculty's fair evaluative practices. Nursing faculty must continuously strive to develop and strengthen those behaviors that foster a relationship that empowers the student and facilitates learning.

CHAPTER 3

METHODOLOGY

This was a descriptive correlational study. "The aim of descriptive correlational research is to describe the relationships among variables rather than to infer cause-and-effect relationships" (Polit & Hungler, 1991, p. 181). A descriptive correlational design was appropriate for this study as the aim of the researcher was to describe relationships among characteristics of nursing students, students' perception of clinical instructor effectiveness, and students' perceptions of learning in the clinical environment.

Research Setting

Schools of nursing, accredited by the National League of Nursing (NLN), at universities in a southwestern state were the setting for data collection. Actual data collection occurred in classrooms in the schools of nursing. Typical university classrooms are well-lighted with both artificial and natural light. Venetian blinds or window shades are usually present for use as necessary to darken the room or prevent glare from sunlight. Desks composed plastic or wooden frames are standard furniture in college classrooms. Central heating and air conditioning provide appropriate seasonal environmental conditions. Room temperature is usually controlled by a thermostat in each classroom. Chalkboards and projection screens are also standard equipment in most university classrooms. Some classrooms are also equipped with overhead projectors, television monitors and video cassette players.

Population and Sample

The population for the study consisted of senior baccalaureate nursing students attending NLN-accredited baccalaureate nursing programs at either public or private universities in a southwestern state. Review of the plethora of research studies related to clinical instruction in nursing demonstrates inclusion of students enrolled at universities with various organizational characteristics. The target populations for these studies have been drawn from many types of universities: public; private, affiliated with a religious order; private, not affiliated with a religious order; and located in urban and rural settings. Inclusion of universities with varying organizational characteristics may enhance response variability (Hughes, 1993).

A convenient sample of senior level students was utilized for the study. A sample size of 83 was obtained. The alpha level was set at .05. Power analysis revealed a .80 probability of data analysis reaching a statistically significant level with a total of 76 subjects. Subjects were students enrolled in designated senior level courses in an NLN-accredited nursing program in which the candidate earns the degree of Bachelor of Science with a nursing major or Bachelor of Science in Nursing. Additional inclusion criteria for subjects were: female and classification as a generic student, i.e. an individual who, upon entering the nursing program, did not possess a license to practice as a Registered Nurse (R.N.) or a Licensed Practical Nurse (L.P.N.). Exclusion criteria for subjects were: male, and classification as a Career Ladder Student, i.e. an individual who possessed a license to practice as an R.N. or L.P.N. upon entry into the program.

These criteria were selected to identify a sample representative of typical students

found in NLN-accredited baccalaureate nursing programs. The general nursing population is 97% female; this is reflected by nursing classes that are composed predominately of females. Curricula for most schools of nursing do not have provisions for practicum experiences for students until the junior year. At the time data were collected, junior students had completed only one semester of the nursing curricula of their respective nursing program; thus, junior level students may have had only one clinical instructor and may have been in only one clinical area. Therefore, junior level nursing students' experiences would be quite limited and they would have no basis for comparison of effectiveness of clinical instructors. Also, by virtue of their status as novices, junior level students perceive the initial clinical experience as threatening (Bradby, 1990b; Pagana, 1988). Senior level nursing students had had experiences in multiple clinical settings, and with a variety of clinical instructors. These experiences enabled subjects to have a broader perspective of the clinical experience and provided a basis of comparison of effectiveness of clinical instructors. Bradby (1990a; 1990b) confirms that although not free from anxiety related to the clinical experience, nursing students' perceptions of the clinical practicum as threatening diminishes after 6 to 10 months experience in the clinical arena. Therefore, inclusion of junior level students possibly would have resulted in skewed data.

Career Ladder Students have had previous experience both in education and practice settings and their view of the clinical practicum differs from that of the generic student. Also, many nursing programs modify the clinical practicum for these students so that the students' life experiences provide an educational experience more suited to the experienced practitioner. Therefore, inclusion of these students also may have resulted in

skewed data.

Protection of Human Subjects

Several procedures were utilized to ensure that subjects' rights are protected. The study was submitted to the University of Oklahoma Institutional Review Board (IRB) of the Norman Campus for review and approval (See Appendix A). Following approval by the IRB, the researcher contacted the dean or department chairperson of each school of nursing and obtained permission to distribute questionnaires to senior nursing students enrolled in the respective programs (See Appendix B).

Prior to distribution of questionnaires, the researcher, or her designee, gave subjects a brief description of the study and associated risks and benefits of participating in the study (See Appendix C). Questionnaires were anonymous and coded so that scores on each test could be associated for purposes of data analysis. Confidentiality was assured both verbally by the researcher or her designee at the beginning of the study and in the consent form. Each subject was given a copy of the consent form (See Appendix D). Return of the completed questionnaire was considered consent to participate. Subjects had the right to withdraw from the study at any time without any harm.

Instruments

Four instruments were used in this study: The Self-Efficacy Scale (Sherer, Maddux, Mercandante, Prentice-Dunn, Jacobs, & Rogers, 1982), Speilberger's State-Trait Anxiety Inventory, Knox and Mogan's Nursing Clinical Teacher Effectiveness Inventory, and the Stewart Evaluation of Nursing Scale developed by Doris Slater-Stewart. Permission to use the State-Trait Anxiety Inventory, Nursing Clinical Teacher

Effectiveness Inventory and the Stewart Evaluation of Nursing Scale was obtained from the respective authors (See Appendix E). Since the Self-Efficacy Scale (Sherer et al., 1982) was a published instrument, and therefore considered part of the public domain, gaining permission to use this instrument was unnecessary. Students' perceptions of self-efficacy specific to nursing were measured by researcher generated items. Validity and reliability of these items were determined by: 1. submitting items to a panel of experts; 2. review by nursing students who were not be a part of the study sample; and 3. calculation of Cronbach's alpha for each item when data were analyzed. Basic demographic data were collected from a questionnaire developed by the researcher (See Appendix F). Information related to development of the instruments, and their respective psychometric attributes are discussed in the following sections of the paper. Discussion of development of nursing self-efficacy items is held in abeyance until Chapter 4 so that data related to reliability of all instruments can be presented consecutively.

The Self-Efficacy Scale

The Self-Efficacy Scale (SES) is a 23-item scale that measures the individual's level of self-efficacy in quantitative terms. (See Appendix G) Sherer, et al., (1982) developed the SES based upon Bandura's Social Learning Theory. Bandura (1977) argues that previous experience and belief in one's ability to accomplish a task influences learning in current situations. The primary goal of Sherer, et al., was to develop an instrument for future researchers to measure self-efficacy which was not related to a particular situation or behavior (Sherer, et al., 1982).

Test Construction and Development

Using Bandura's Social Learning Theory, items were developed to "measure general self-efficacy expectancies in areas such as social skills or vocational competence. These items focused on three areas: (a) willingness to initiate behavior, (b) willingness to expend effort in completing the behavior, and (c) persistence in the face of adversity. " (Sherer, et al., 1982, p. 665). The original version of the scale had 36 items and was administered to 376 students attending introductory psychology classes. Items were ranked on a 14-point Likert scale ranging from "strongly disagree" to "strongly agree" (Sherer, et al., 1982). In a subsequent study by Sherer & Adams (1983) the SES was modified to a 5-point Likert scale to facilitate scoring. This modification produced results that were comparable to the original version (Sherer & Adams). Items that were reversed were converted for scoring purposes; the higher the self-efficacy expectation, the higher the score. Subjects completed the SES and six personality measures which were added to test construct validity. Varimax rotation determined a two factor structure provided an optimal number of factors but did not reduce the total amount of variance. Only items loading at the .40 level or above on one factor only were retained. Of the total 36 items, 13 did not meet this criterion and were deleted (Sherer, et al.).

Seventeen items composed Factor 1 and comprised 26.5% of the total variance (Sherer, et al., 1982). These items provided an overall measure of self-efficacy, and were not associated with any specific area of behavior. This factor was named the General Self-efficacy subscale. On this subscale, the 376 subjects' mean score was 172.65, SD=27.31. Factor 2 was composed of the remaining six items, comprising 8.5% of the total variance,

and indicated expectation of efficacy in social situations. This factor was designated the Social Self-efficacy subscale. The mean and standard deviation of this subscale were M=57.99, SD=12.08 (Sherer, et al.).

Internal consistency for both subscales was determined. Cronbach's alpha reliability coefficients were .86 for the General Self-efficacy subscale and .71 for the Social Self-efficacy subscale (Sherer, et al., 1982).

Following deletion of 13 original items, Sherer, et al., (1982) administered the refined instrument to 298 introductory psychology students. Factor analysis replicated the results of the original scale, for the two subscales of General Self-efficacy and Social Self-efficacy (Sherer, et al., 1982).

Construct Validity

To determine construct validity of the SES, Sherer, et al., (1982), correlated SES scores with of other measurements other personality characteristics. These measurements were: Rotter's Internal-External Control Scale (I-E), the Personal Control Subscale of the I-E scale, Marlowe-Crowne Social Desirability Scale, Barron's Ego Strength Scale, Holland and Baird's Interpersonal Competency Scale and Rosenberg's Self-esteem Scale. Although these instruments do not measure self-efficacy per se, personality characteristics related to personal beliefs in one's ability are measured (Sherer, et al.).

If the individual attributes success to innate ability rather than to luck, experiences of personal mastery enhance self-efficacy expectations (Bandura, 1977). Therefore, the individual with an internal locus of control is more likely to have a higher self-efficacy level (Sherer, et al..). Low scores on the I-E Scale demonstrate an internal locus of

control whereas higher scores on the SES demonstrate a greater degree of self-efficacy. Therefore, Sherer, et al., predicted a moderately negative correlation between scores on the I-E Scale and the SES. This hypothesis was supported (r=-.287 for the General Self-efficacy Subscale, $p \leq .0001$, and r=-.173, for the Social Subscale, $p \leq .01$) Also of particular interest, was the relationship of self-efficacy and the Personal Control Subscale of the I-E Scale. Sherer, et al., also expected a negative correlation between these scales. Pearson's r revealed a correlation of -.355 ($p \leq .0001$) and -.132 ($p \leq .01$), respectively, for the General and Social subscales (Sherer, et al., 1982).

Others are likely to view one's belief in ability to perform an assortment of tasks as a positive characteristic (Sherer, et al., 1982). A hypothesis of a moderate correlation between SES and Marlowe-Crowne Social Desirability Scale was supported $r = .431$ and $r = .278$ for the General Self-efficacy subscale and Social Self-efficacy subscale, respectively ($p \leq .0001$) (Sherer, et al., 1982).

According to Sherer, et al., (1982), the Ego-Strength Scale is designed to predict response to psychotherapy. High scores on this scale are obtained by individuals who are determined, persistent, and socially effective. The Interpersonal Competency Scale measures one's personal effectiveness, proficiency in dealing with people and overall positive mental health. Some of the items on the Interpersonal Competency Scale are applicable to self-efficacy, however, others are not. Sherer, et al., predicted moderately positive correlations between the SES and each of these instruments. Between the SES and Ego Strength Scale correlation coefficients of .290 and .061 for the General and Social subscales, respectively, were determined ($p \leq .0001$). A correlation of r=.451 for the

General scale and r=.432 for the Interpersonal Competency ($p \leq .0001$) were determined.

Although self-efficacy is not synonymous with self-esteem, self-efficacy does contribute to the concept of self-esteem. Self-esteem is the attitude one has about general worth as an individual. Belief in one's ability to accomplish new tasks and personal mastery of previous tasks contribute to the individual's concept of self-esteem. Low scores on Rosenberg's Self-esteem scale indicate high self-esteem (Sherer, et al., 1982). Therefore, a moderately low correlation was found between scores on Rosenberg's Self-esteem scale and the SES (r=-.510 and -.279 for the General and Social subscales, respectively, $p \leq .0001$).

Additional investigation by Sherer and Adams (1983) confirmed construct validity of the SES. During this study, the instrument was administered to 101 students enrolled in introductory psychology classes. Scores on the SES were compared to three validity and 10 clinical scales of the MMPI (*L, F, K, Hs, D, Hy, Pd, Fmf, Pa, Pt, Sc, Ma* and, *S*), the Ranthus Assertive Schedule and the Masculinity and Femininity scales of the Bem Sex-role Inventory. According to Sherer and Adams (1983) three scales on the MMPI (*D, Pt,* and *Si*) provide measures most sensitive to college students' adjustments and were, therefore, the primary scales used for specific prediction of a correlation with the SES. A moderately negative correlation was predicted with these MMPI subscales and the SES. Willingness to take the initiative in social situations is measured by the Ranthus Assertiveness Schedule and aggressive characteristics are measured by the Masculinity subscale of the Bem-Sex role inventory. Sherer and Adams predicted a moderately positive correlation between the SES score and scores on the Ranthus Assertiveness

Schedule and the Masculinity subscale. All hypotheses were supported ($p \leq .05$), further validating construct validity of the SES.

Criterion Validity

Sherer, et al., (1982) tested the criterion validity of the SES by correlation of SES scores and a demographic questionnaire to elicit data regarding the highest educational level completed and highest military rank obtained by 150 inpatients of a southern Veterans Administration Medical Center. Educational level and military rank were selected as predictors based upon the rationale that individuals with higher self-efficacy expectations should have a successful history of experiences in significant areas of life whereas those individuals with lower self-efficacy expectations should lack successful experiences in these areas. Sherer, et al., found a positive correlation between educational level, military rank and General Self-efficacy scores. Evidence of criterion validity was also determined by a negative correlation between Social Self-efficacy and the number of times subjects reported being fired from a job or quitting a job, indicating individuals with lower Social Self-efficacy expectations had difficulty maintaining employment. This finding may indicate that individuals with lower self-efficacy expectations, particularly in social situations, may have difficulty dealing with people. This study provides additional evidence of the validity of the SES (Sherer, et al., 1982).

In summary, the SES has been demonstrated to be a reliable and valid measure of self-efficacy. The SES measures general self-efficacy expectations based upon previous experience and the tendency to attribute success to luck or chance. These expectations are likely to be apparent as a general pattern of behavior occurring during situations in

which the individual has little or no knowledge. Having little or no knowledge of the clinical arena certainly would describe the generic nursing student. Hence, this instrument was appropriate for measuring self-efficacy in this population. Other advantages of the instrument include its brevity and ease of scoring.

State -Trait Anxiety Inventory

Speilberger's (1983) State-Trait Inventory (STAI) has been used extensively in clinical practice and research. The STAI has been employed in a plethora of studies by investigators from a variety of disciplines including medicine, education, nursing, and sociology. Two self-report scales, one measuring state anxiety while the other measures trait anxiety, comprise the instrument (See Appendix H). State anxiety, how the individual feels at the moment, is measured by the S-Anxiety scale (Form Y) which consists of 20 statements. Trait anxiety, how the individual generally feels, is evaluated by 20 statements that comprise the T-Anxiety scale.

The S-Anxiety subscale measures the essential attributes of feelings of nervousness, apprehension, tension and worry (Speilberger, 1983). A 4-point Likert scale is used and respondents rate themselves with responses ranging from: (1) not at all, (2) somewhat, (3) moderately so, and (4) very much so. "Scores on the S-Anxiety scale increase in response to physical danger and psychological stress and decrease as a result of relaxation training" (Speilberger, 1983, p.2). This scale has been used on multiple occasions to appraise S-Anxiety generated by stressful experimental procedures and life stressors such as impending surgery, job interviews, or an important academic examination (Speilberger).

The T-Anxiety scale has been used to evaluate trait anxiety in "medical, surgical, psychosomatic and psychiatric patients" (Speilberger, 1983, p.2). This scale has also been used to screen high school and college students and military recruits for anxiety problems as well as evaluating outcomes of counseling, psychotherapy, and behavior modification programs. Respondents rate themselves on a 4-point Likert-type scale ranging from: (1) almost never, (2) sometimes, (3) often, and (4) almost always. Because they view situations as more threatening, individuals with high T-anxiety usually display increases in S-Anxiety more often than persons with low T-Anxiety (Speilberger).

Test Construction and Development

Construction of the STAI began in 1964 (Speilberger, 1983). Speilberger's primary goal was to develop one set of items, administered with different instructions, that measured state and trait anxiety. Initially, the pool of items whose content was most closely related to that of other anxiety scales was modified to be a measure of both S-Anxiety and T-Anxiety. The result was a single scale, Form A, which, when administered with differing instructions, could measure either state or trait anxiety (Speilberger, 1983).

In further research of Form A, Speilberger (1983) discovered that the connotation of key words interfered with the use of the items to measure both S- Anxiety and T-Anxiety. Also, some of the best items for both classes of anxiety had been excluded, for altering instructions for these items could not surmount their distinct state or trait connotations. Therefore, the strategy for test construction was revised. For Form X, items with the psychometric properties for measuring either state or trait anxiety were selected. Each scale was composed of 20 items.

> Only five items met the validation criteria for both scales; three of these were retained verbatim, and two were rewritten but kept their original key terms. The remaining fifteen S-Anxiety and fifteen T-Anxiety items were sufficiently different in content or connotation to be regarded as unique to one type of anxiety measure and independent of the other (Speilberger, 1983, p. 12).

Subsequent research (Speilberger, 1983) demonstrated that the S-Anxiety scale of Form X was more consistent and stable than the T-Anxiety Scale. This was due to the S-Anxiety scale having an equal number of anxiety-present and anxiety-absent statements, whereas the T-Anxiety scale had 13 anxiety-present items and only 7 anxiety-absent statements (Speilberger).

Further revision of the STAI resulted in Form Y (Speilberger, 1983). This version of the STAI contains six replacement items in both scales. Weaker items were replaced with those of equal or better psychometric properties and content which was more consistent with Speilberger's conceptualization or state and trait anxiety. Additionally, the T-Anxiety scale has an improved balance between anxiety-present and anxiety-absent items, 11 and 9, respectively (Speilberger).

Form Y was analyzed utilizing four factors: State Anxiety Present, State Anxiety Absent, Trait Anxiety Present and Trait Anxiety Absent (Speilberger, 1983). Thirty-nine of the 40 items loaded at .40 or above on the factor corresponding to its content. Form Y was determined to be more differentiated and stable than Form X. Form Y also had a better balance of anxiety-present and anxiety-absent items. Additionally, Form Y also differentiates anxiety from depression better than does Form X (Speilberger).

Reliability

Speilberger (1983) determined reliability for the STAI Form Y through testing the

stability and internal consistency of the scale. Results are as follows:

Stability. Data for stability for Form Y were based upon two groups of high school students who tested in classroom settings. Stability was established by the test-retest method. For the T-Anxiety scale, test-retest correlation coefficients were relatively high and ranged from .65 to .75. Reliability coefficients for the S-Anxiety scale were relatively low and ranged from .34 to .62. Low stability coefficients for the S-Anxiety scale were expected for a measure of transient anxiety would not remain stable over time.

Internal Consistency. As previously mentioned, S-Anxiety is transient; therefore, measures of internal consistency such as the alpha coefficient are more appropriate indices of reliability of the S-Anxiety scale than are test-retest correlations. Cronbach's alpha coefficients for both scales were computed for a normative sample of students, military recruits and working adults. For the S-Anxiety scale, alphas were above .90 for all but one group (.86 for high school males) with a median coefficient of .93. Alpha coefficients for the T-Anxiety scale were also consistently high, with all being .89 or higher and having a median coefficient of .90. Speilberger (1983) notes that alpha coefficients for the S-Anxiety scale are customarily higher when the test is administered under conditions of psychological stress.

Computation of item-remainder correlations for the same normative samples provided further corroboration of the internal consistency of the STAI. For the S-Anxiety scale, the median item-remainder correlation was .55 for the high school students, .59 for the college students, .61 for military recruits, and .63 for the working adults. Corresponding T-Anxiety correlations were .54, .57, .52 and .56, respectively. For more

than half of the items on both scales, item-remainder correlations were .50 or higher. In all normative samples, 39 of the 40 items had item-remainder correlations of at least .30.

Validity

Speilberger (1983) established validity of the STAI through testing the construct and concurrent validity. Results are as follows:

Construct Validity. Construct validity for Form Y is partially based upon normative data from Form X. High correlations, ranging from .96 to .98, between Form X and Form Y were reported by Speilberger (1983). Construct validity of the T-Anxiety scale is evident when the mean scores of neuropsychiatric patient groups (normative data from Form X) are compared with scores of normal subjects (normative data from Form Y). All but one of the neuropsychiatric patient groups had considerably higher scores on the T-Anxiety scale than did the normal subjects. This finding demonstrates that the STAI discriminates between normal and psychiatric patients for whom anxiety is a major symptom. Speilberger (1983) also found scores of medical-surgical patients with psychiatric complications were higher than scores of general medical-surgical patients without psychiatric complication. This demonstrates the scale also identified nonpsychiatric patients with emotional problems.

Evidence of construct validity of the S-Anxiety scale is demonstrated by scores of military recruits. Recruits were tested a short time after they began very stressful training programs. Their scores were much higher than those of high school and college students about the same age who were tested under relatively nonstressful conditions. Additional evidence of construct validity of the STAI may be found in normative data from Form X.

S-Anxiety scores of college students were significantly higher prior to taking examinations and significantly lower following relaxation training.

Correlations between Form Y S-Anxiety and T-Anxiety scales for normative samples of students, military recruits and working adults ranged from .59 to .75. Individuals high in T-Anxiety tended to be higher in S-Anxiety even in situations that were not stressful. According to Speilberger (1983), a higher correlation between S-Anxiety and T-Anxiety is expected in social evaluative situations whereas, a lower correlation is expected in situations fraught with physical danger. As the correlations between the two scales appear to be dependent upon the amount and kind of stress associated with conditions under which the S-Anxiety scale is administered, this has strong implications for the construct validity of the STAI.

Under circumstances that hold some threat to self-esteem, or in which personal adequacy is evaluated, correlations between S-Anxiety and T-Anxiety scales are typically higher. In situations characterized by perceived physical danger, correlations are usually lower. According to Speilberger (1983), there is no relationship between the level of T-Anxiety and changes in S-Anxiety precipitated by threats of physical danger.

Concurrent Validity. Correlations with the IPAT Anxiety Scale and the Taylor Manifest Anxiety Scale (TMAS) give evidence of concurrent validity for the Form X T-Anxiety scale. These instruments were the most widely used measures of trait anxiety during development of the STAI (Speilberger, et al., 1970). Correlations between the T-Anxiety scale and the IPAT ranged from .75 to .77. Correlations between the T-Anxiety scale and the TMAS were relatively high, ranging from .79 to .85 (Speilberger, 1983).

Speilberger (1983) states that the T-Anxiety scale, IPAT and TMAS can be considered essentially equivalent measures of trait anxiety. However, a significant advantage of the T-Anxiety scale is brevity. This scale is less than half the length of both the IPAT and TMAS scales and thus, requires a shorter time for administration. Additionally, Form Y measures trait anxiety without items with depressive content and with high internal consistency whereas the TMAS which contains items reflecting depression rather than anxiety and the IPAT has some items than seemly reflect anger rather than anxiety (Speilberger, 1983).

In summary, the STAI has been utilized in a plethora of studies to measure state and trait anxiety. Populations studied have included working adults, military personnel, high school and college students, and psychiatric, medical-surgical and dental patients. Major advantages of the instrument are brevity, ease of administration and scoring, and the sixth-grade reading level of key words in the items. For the purposes of this study, the interest was in how subjects generally feel, therefore only the T-Anxiety scale was utilized.

Nursing Clinical Teacher Effectiveness Inventory

The Nursing Clinical Teacher Effectiveness Inventory (NCTEI) is a 47-item questionnaire developed by Knox and Mogan (1985). (See Appendix I). Clinical instruction is a vital part of nursing education and the clinical instructor plays critical role in students' learning. Knox and Mogan's primary goal was to develop an instrument to identify effective and ineffective behaviors of clinical nursing faculty. Identification of ineffective behaviors would assist in remediation of faculty behaviors so that students' learning would not be obstructed by inefficacious performance of clinical instructors

(Knox & Mogan, 1985). The NCTEI has been used by numerous investigators nationally and has also been translated into several foreign languages (J. Mogan, personal communication, July 17, 1995).

Test Construction and Development

Items for the NCTEI were derived from a former study by Knox and Mogan which elicited nursing students' perceptions of effective clinical instructors (Mogan & Knox, 1983) as well as a comprehensive review of literature related to clinical instruction in nursing and nursing education. Items were divided into five categories of teacher characteristics: teaching ability, nursing competence, evaluation, interpersonal relations and personality (Knox & Mogan, 1985). Subjects ranked each item on a 7-point Likert-type scale ranging from "not at all descriptive" to "very descriptive". In addition, two responses, "don't know" and "not applicable" were incorporated. Space was also provided for remarks about each item. On the final instrument to the additional responses, as well as the space for remarks, have been deleted.

Reliability

Reliability of the instrument was established in two ways: first by utilizing Nunnally's suggestion of obtaining coefficient alpha's prior to other types of reliability estimates and by the test-retest method. Knox and Mogan utilized the subprogram of the SPSS system for establishing coefficient alpha's. For each category, estimates of reliability were obtained. These results were: teaching, α=.89; nursing competence α=.84; evaluation, α=.82; interpersonal relationship, α=.86; personality, α=.83 (Knox & Mogan, 1985). "Reliability of each item was also estimated with reliability coefficients ranging

from α=.79 for item 42 (Is a dynamic and energetic person), to α=.88 for #2 (Emphasizes what is important)" (J. Mogan, personal communication, July 17, 1995). The instrument was then administered to 668 subjects (nursing students, nursing faculty and graduates of a baccalaureate nursing program). Coefficient alphas ranged from .70 to .92 (Knox and Mogan, 1985).

Test-Retest Reliability. The NCTEI was administered to 69 third-year generic students enrolled in a baccalaureate nursing program. Four weeks later, it was again completed by the same group of students. Coefficient alphas ranged from .76 to .93 (J. Mogan, personal communication, July 17, 1995).

Validity

Knox and Mogan established evidence of content validity. First, items were developed based upon the authors' previous study of students' perceptions of effective and ineffective teaching behaviors of clinical nursing faculty and by an extensive literature review. Only items that were found in the literature and mentioned by students were included. Second, the instrument was administered to groups of students, faculty and graduates. These are groups who are usually involved in faculty evaluation. Results demonstrated that all items were rated as important by all three groups (mean importance ratings ranged from 84-93%) (Knox & Mogan, 1985).

Mogan and Knox (1987) found that the NCTEI did discriminate between "best" and "worst" instructors, thus giving further evidence of the instrument's validity. Their study was replicated by Nehring (1990) who obtained results similar to Mogan and Knox. Sieh and Bell (1994) administered the NCTEI to students enrolled in an associated degree

nursing program. Their findings validated those of Mogan and Knox (1987) and Nehring (1990).

In summary, the NCTEI has been used in numerous studies, both nationally and internationally, to evaluate effectiveness of clinical nursing faculty. Nursing students are the population for which the NCTEI was designed to be used. Major advantages of using this instrument include ease of administration and scoring, brevity and appropriate reading level.

Stewart Evaluation of Nursing Scale

The Stewart Evaluation of Nursing Scale (Stewart Scale) is a 47-item tool to evaluate clinical performance (Slater-Stewart, 1979) (See Appendix J). Items reflect current practice and are also reflective of the expanded role of the nurse. According to Slater-Stewart (1979), the instrument may be utilized in both education and practice settings.

Test Construction and Development

Based upon the nursing process, the Stewart Scale assesses the performance of nurse in any clinical arena (Slater-Stewart, 1979). Slater-Stewart utilized existing professional literature and standards of practice from the American Nurses' Association to generate items for the instrument. The Stewart Scale is divided into five subscales which identify strengths and weaknesses of the nurse being rated. Items composing the subscales describe actions performed by the nurse while performing patient care and are grouped according to the five steps of the nursing process: assessment, planning, implementation and evaluation. Each item is ranked on a 5-point Likert-type scale from "Best

Performance" to "Poorest Performance". The Stewart Scale may be used for summative or formative evaluation (Slater-Stewart, 1979).

Reliability and Validity

Content validity was determined by having a panel of experts review the items (Slater-Stewart, 1979). A panel of experts composed of masters' prepared nurse educators and staff nurses employed in a variety of clinical settings reviewed all items. Items were deleted if a high percentage of disagreement existed concerning the importance of an item to nursing or the item's meaning (Slater-Stewart, 1979).

Interrater reliability was established by both laboratory and field testing (Slater-Stewart, 1979). Laboratory testing was conducted first. Five nurses who held a master of science degree in nursing acted raters. Raters viewed films of nurses providing patient care and using the Stewart Scale, independently scored each nurse's performance. A one-way analysis of variance was used to calculate interrater reliability coefficients for each of the five subscales and for the total instrument. Correlations of .71 to .84 were obtained. Cronbach's alpha was used to determine internal consistency and alphas of .91 to .99 were obtained (Slater-Stewart).

Following laboratory testing, the field testing was conducted. Four teams composed of two persons observed a total of six subjects. Observations were of each subject were simultaneous and scoring was independent. Coefficient alphas were calculated for both subscales and total instrument. Slater-Stewart (1979) found that the alphas did not differ significantly from the laboratory data.

In summary the Stewart Evaluation of Nursing Scale has been utilized as the

instrument for evaluation of nursing students' performance by many schools of nursing Advantages of the instrument include ease of administration and scoring and appropriate reading level.

Data Collection

Data were collected early in the Spring semester of 1997. Permission to distribute questionnaires to students was obtained from the dean or department chairperson of selected schools of nursing. Deans and chairpersons were also asked to identify a faculty volunteer to serve as contact person for the researcher. The researcher contacted the designated faculty member to schedule a time for the researcher or her designee to come to the school of nursing to distribute questionnaires.

Having obtained permission from the faculty member, the researcher, or her designee, approached subjects in the classroom. Subjects were given a brief oral description of the study which included any associated risks and benefits or participation in the study. Any questions subjects had were answered by the researcher, or her designee. A consent form was given to each subject and questionnaires were distributed. Completed questionnaires were returned to the researcher, or her designee, and subjects were free to leave the classroom. Upon written request, the researcher will forward a report of the completed study to any subject asking for results of the study.

Treatment of Data

Data from each questionnaire were entered into the computer and the SPSS program was used for data analyses. Demographic data for subjects were analyzed using descriptive statistics. Interval level data were analyzed by using multiple linear regression

and Pearson's product-moment correlation coefficient. Nominal level data were analyzed using Spearman's *rho*. Two-tailed t-tests for independent groups were also utilized to determine any significant difference between students attending private universities and those attending public universities. Data are presented in tabular format.

Chapter Summary

This was a descriptive correlational study conducted to investigate relationships among senior baccalaureate nursing students' beliefs of self-efficacy, levels of anxiety, perceptions of clinical teacher effectiveness and their perceptions of learning in the clinical environment. A convenient sample of 83 subjects from two public universities and two private universities was obtained. Data were analyzed using the SPSS computer program. Statistical tests utilized were: descriptive statistics, two-tailed t-tests of independent groups, correlation and multiple regression.

CHAPTER 4

ANALYSIS OF DATA

This chapter presents the results of a descriptive correlational study. Multiple regression analysis was used to answer the research question. Both correlation and multiple regression analyses were used to test the hypotheses. Demographic data and additional study findings will also be presented.

Description of Sample

Two public and two private NLN-accredited schools of nursing at universities in a Southwestern state were used as sites for data collection. A total of 112 questionnaires were distributed to senior baccalaureate nursing students. Eighty-three completed and usable questionnaires were returned. This represents a response rate of 74.1%.

Of the total sample ($N = 83$), 55 students attended public universities, while 28 attended private universities. Four ethnic groups were represented in the sample; interestingly, no African American students participated in the study. The typical student was a 22 year old single, Caucasian female. Selected demographic characteristics are presented in Table 1.

Students reported assignment to a variety of clinical areas for the current clinical practicum. Both acute care and community health settings were represented with community health being the setting to which the majority of students were assigned. Seventy-one percent of students had been in the current clinical setting for four to five weeks. Students spent an average of 10 to 14 hours per week in the clinical environment.

Table 1

Frequency Distribution of Demographic Characteristics of Sample

Variable	*f*	%
Race[a]		
Caucasian	74	89.2
Asian	4	4.8
Hispanic	2	2.4
Native American	2	2.4
Marital Status		
Married	36	43.4
Divorced	8	9.6
Separated	1	1.2
Never Married	38	45.8
Age[a]		
Mean	27.16	
Median	24	
Mode	22	
Range	(20-49)	

Note: N=83.

[a]Missing data for 1 case

Table 2 presents demographic characteristics of the clinical settings.

Instruments Used In Study

Four instruments were used in the study. These instruments were: The Self-Efficacy Scale (SES), the Trait Anxiety subscale of Spielberger's State-Trait Anxiety Inventory (STAI-T), Nursing Clinical Teacher Effectiveness Inventory (NCTEI), and the Stewart Evaluation of Nursing Scale (Stewart Scale). In addition, prior to data collection, the SES was modified to include 13 items specific to nursing. A discussion of the development of these items will be presented, followed by data related to reliability and validity of all instruments.

Nursing Self-Efficacy Subscale

Bandura (1986) argues that beliefs about one's self-efficacy are task specific. To measure an individual's self-efficacy beliefs about performance of a particular task, an instrument should include items related to the same, or similar, skills necessary for performance of that task (Bandura, 1986; Greene & Miller, 1996). Therefore, for the purpose of this study, the decision was made to modify the SES by including a subscale which measures subjects' self-efficacy beliefs related to the performance of nursing tasks.

As no instruments specific to nursing self-efficacy beliefs were found in the literature, the nursing self-efficacy subscale was constructed. Based upon the researcher's knowledge and experience in both clinical practice and nursing education, 17 items measuring self-efficacy specific to nursing were generated (See Appendix K). To increase the likelihood of validity, items were generated using the same, or similar, language of original SES items, with a focus upon nursing practice. Items were constructed to be

Table 2

Frequency Distribution of Sample Demographics Related to Clinical Assignment

Variable	*f*	%
Clinical Area		
Medical-Surgical	11	13.30
Community Health	52	62.70
Critical Care	17	20.50
OB/GYN	2	2.40
Other	1	1.20
Weeks in Agency		
Three	8	9.60
Four	32	38.60
Five	28	33.70
Six	8	9.60
Other[a]	7	8.40
Hours per Week of Clinical[b]		
Five to Nine	14	17.10
Ten to Fourteen	28	34.10
Fifteen to Nineteen	28	34.20
Twenty or More	13	14.60

Note: N=83.

[a]Greater than 6 weeks, actual number of weeks not specified. [b]Missing data for one case.

rated on a 5-point Likert type scale with the same anchors used in the original SES.

Content validity of the nursing self-efficacy items was assessed by submitting the items to a panel of experts. Two panel members were educators having expertise about the concept of self-efficacy. They were asked to evaluate the extent to which the statements adequately represented self-efficacy beliefs as well as the relevance of each item. The remaining panel members were nurse educators who were asked to review the items for relevance to nursing. Based upon evaluation by these experts, one item was deleted and ten were reworded (See Appendix L).

The nursing self-efficacy scale was then administered to five female baccalaureate nursing students who would not be a part of the study sample. After they had completed the questionnaire, students were interviewed to identify questions about the clarity of items. All students had questions about two items. These items were: 1) I would rather not work with patients whose care is complex; and 2) I feel confident in performing a new nursing skill without direct supervision. Regarding the first item, students stated that the meaning of the word "complex" was unclear. They questioned whether "complex" referred to the seriousness of the patient's condition or injury, or to the type of nursing care required. Students concurred that substituting the word "complicated" for "complex" would eliminate the confusion. The item was so modified.

When discussing the item related to performance of a new skill, students stated their level of confidence would depend upon the type and complexity of the skill. For example, one student stated, "If it was something fairly easy, like putting TED hose on a patient, I'd feel okay doing it by myself. But if it was the first time I had to do something

like give an injection or catheterize a patient, I'd want my instructor with me. Or a staff nurse, if my instructor was busy. It would just depend on what I was supposed to do whether or not I would feel comfortable doing it without supervision." Other students expressed similar opinions about the item. Based upon students' evaluation, the item was deleted. The final 15 items were added to the SES.

Reliability and Validity

To investigate reliability for the instruments, Cronbach's alphas were computed for all questionnaires. Analyses were based upon the study sample of $\underline{N} = 83$. Reliability of the SES was investigated in two stages. Initially, Cronbach's alphas were computed for each subscale. Cronbach's alphas were as follows: General Self-efficacy, .81; Social Self-efficacy, .71; and Nursing Self-efficacy, .82. Results for the General and Social Self-efficacy subscales are similar to those reported by Sherer et al (1982). They reported reliability coefficients of .86 and .71, respectively, for the General and Social Self-efficacy subscales. Two of the Nursing Self-efficacy items had inter-item correlations of less than .30 and were deleted. These items were: 1) I am confident I will be a good nurse; and 2) I am more confident taking care of patients whose medical diagnosis is familiar to me. Cronbach's alpha was then recalculated for the Nursing Self-efficacy Subscale with these items excluded and a reliability coefficient of .83 was obtained.

Cronbach's alpha for the STAI-T was .92. This is comparable to findings of Spielberger et al. (1980) who reported a reliability coefficient of .91 for college females.

The NCTEI is composed of four subscales. Cronbach's alphas were calculated for each subscale. Results were: teaching ability, .97; nursing competence, .95; interpersonal

relationship, .98; and personality, .92. These are somewhat higher than those reported by Knox and Mogan. Their results were: teaching ability, α=.89; nursing competence α=.84; interpersonal relationship, α=.86; and personality, α=.83 (Knox & Mogan, 1985). The higher coefficients may be a result of redundancy among some of the items. Cronbach's alpha was also computed for the entire instrument and a reliability coefficient of .98 was obtained. Knox and Mogan also reported coefficient alphas for the entire instrument that ranged from .70 to .92.

Cronbach's alpha for the Stewart Scale was .97. This is consistent with findings of Slater-Stewart (1979) who obtained reliability coefficients of .91 to .99.

Prior to data analyses, descriptive statistics were computed to determine if distributional assumptions for the use of parametric statistics were met. Mean scores, standard deviations and range of scores are presented in Table 3. Intercorrelations among major study variables are presented in Table 4.

Findings

This study was guided by one research question. Four hypotheses were also investigated. Findings pertaining to the research question will be presented first. Then findings related to the hypotheses will be discussed.

Research Question

What are the relationships among baccalaureate nursing students' degree of self-efficacy, levels of anxiety, perceptions of clinical instructor effectiveness and their perceptions of learning in the clinical environment?

Standard multiple regression was the statistical test selected to examine

Table 3

Descriptive Statistics for Major Variables

Variable	Mean	SD	Range
SELFNSG[a]	57.25	8.08	34-71
SELFEFTO[b]	95.11	10.00	61-112
TRAITO[c]	62.01	9.30	27-78
TEACHTO[d]	259.42	59.38	64-329
STEWTO[e]	197.28	20.16	147-232

Note: N=83.

[a]Nursing Self-efficacy. [b]Total Self-efficacy. [c]Anxiety. [d]Teacher Effectiveness. [e]Learning.

Table 4

Intercorrelations Among Major Study Variables

	1	2	3	4	5
SELFNSG[a]	1.00	--	--	--	--
SELFTO[b]	.67**	1.00	--	--	--
TRAITTO[c]	.49**	.47	1.00	--	--
TEACHTO[d]	.09	.05	.23	1.00	--
STEWTO[e]	.61**	.38**	.40**	.17	1.00

Note: N=83.

[a]Nursing Self-efficacy. [b]Total Self-efficacy. [c]Anxiety. [d]Teacher Effectiveness. [e]Learning.

**p≤.01. *p≤.05.

relationships among these variables. Since the researcher was also interested in students' perceptions of self-efficacy specific to nursing, items composing the nursing self-efficacy subscale of the SES were excluded from analysis of the remaining items of the SES and were treated as an additional instrument. This introduced another variable, nursing self-efficacy. Introduction of this variable presented multicollinearity among the variables, therefore, stepwise multiple regression was also performed (Polit, 1996). Stepwise multiple regression was also used to explore which variable would contribute most to the prediction of the students' perceptions of learning in the clinical environment

Standardized regression coefficients, squared semipartial correlations (sr^2), R^2 and adjusted R^2 for the standard regression of students' perceptions of learning on levels of nursing self-efficacy, perceptions of teacher effectiveness, anxiety, and total self-efficacy levels are presented in Table 5. In combination, levels of nursing self-efficacy, perceptions of teacher effectiveness, anxiety, and levels of total self-efficacy, account for 39% of the variance in scores for students' perceptions of learning in the clinical area. Comparison of the squared semipartial correlations indicate that the strongest contributions to the R^2 was made by nursing self-efficacy and that contributions of the other variables are minuscule. In stepwise regression, only one variable, nursing self-efficacy, entered the regression equation. This variable accounted for 36% of the variance in scores for students' perceptions of learning in the clinical area. Results of stepwise regression analysis are presented in Table 6.

Hypothesis 1

Baccalaureate nursing students with high levels of self-efficacy will report higher

Table 5

Standard Multiple Regression of Learning on Students' Perceptions

Dependent Variable	Independent Variables	Beta Wts	sr^2	t-Value
LEARNING	SELFNSG[a]	.5848	.1765	4.757*
	TEACHTO[b]	.0906	.0077	.995
	TRAITTO[c]	.1275	.0112	1.196
	SELFEFTO[d]	-.0747	.0029	- .615
	Model $R^2 = .39$; Adj. $R^2 = .36$; $(F_{4,78} = 12.56)^*$			

Note: N = 83.

[a]Nursing Self-efficacy. [b]Teacher effectiveness. [c]Anxiety. [d]Total self-efficacy.

* $p \leq .000$

Table 6

Stepwise Multiple Regression of Learning on Students' Perceptions of Learning in the Clinical Environment

Independent Variables	Multiple R	R^2	Adjusted R^2	R^2 Change	F of Equation	Beta In (Step 1)
Step 1						
SELFNSG	.6053	.3664	.3586	.3664	46.8442*	.6053

Note: N = 83.

[a]Nursing self-efficacy.

* $p \leq .000$

perceptions of learning in the clinical environment.

Pearson's r was the statistical test used to test this hypothesis. A correlation coefficient of .38 was obtained, which was significant ($p \leq .01$). Therefore, the hypothesis was supported. This is indicative of a moderate relationship between students' levels of self-efficacy and perceptions of learning in the clinical area. However, the relationship between self-efficacy levels and perceptions of learning in the clinical area accounts for only 14% of the shared variance between the two variables ($r^2 = .14$). When students' levels of nursing self-efficacy were correlated with their perceptions of learning in the clinical environment, a correlation coefficient of .61 was computed which was also significant ($p \leq .01$) and indicates a strong relationship between the two variables. The relationship between these two variables accounts for 37% of the variance between levels of nursing self-efficacy and perceptions of learning in the clinical area ($r^2 = .37$).

Hypothesis 2

Baccalaureate nursing students with high anxiety levels will report lower perceptions of learning in the clinical environment.

This hypothesis was tested using Pearson's r. A correlation coefficient of .40 was computed and was significant ($p \leq .01$). Although a relationship is indicated by the correlation coefficient, findings do not support this hypothesis. The relationship may be curvilinear, which would account for the significant, positive nature of the correlation coefficient.

Hypothesis 3

Baccalaureate nursing students with high levels of self-efficacy and low levels of anxiety

will percv ceive their clinical instructor as effective in the clinical environment.

The statistical method selected to test this hypothesis was standard multiple regression. Following this, stepwise regression was performed to determine which independent variable contributed most to perceptions of clinical instructor effectiveness.

Standard regression coefficients, squared semipartial correlations (sr^2), R^2, and adjusted R^2 for the standard regression of perceptions of clinical instructor effectiveness on levels of self-efficacy and levels of anxiety are presented in Table 7. In combination, anxiety and levels of total self-efficacy accounted for only 6% of the variance in scores of students' perceptions of teacher effectiveness. The F statistic was not significant; therefore, the hypothesis was not supported.

Interestingly, in stepwise analysis, only one variable, anxiety, entered the regression equation. This variable accounted for 5% of the variance in scores of perceptions of teacher effectiveness. Table 8 presents these results.

Hypothesis 4

Baccalaureate nursing students who perceive their clinical instructor as effective will report higher perceptions of learning in the clinical environment.

This hypothesis was tested using Pearson's product moment correlation statistic. A correlation coefficient of .17 was obtained which was not significant. Therefore, this hypothesis was not supported.

Additional Findings

To investigate the influence of demographic characteristics on study variables, further correlational analyses were conducted. Several demographic characteristics were

Table 7

Standard Multiple Regression of Teacher Effectiveness on Self-efficacy and Anxiety

Dependent Variable	Independent Variables	Beta Wts	sr^2	t-Value
TEACHTO[a]	TRAITTO[b]	.2683	.0563	2.18*
	SELFEFTO[c]	- .0755	.0045	- .62
	Model $R^2 = .06$; Adj. $R^2 = .04$; ($F_{2,80} = 2.50$)			

Note: N = 83.

[a]Teacher effectiveness. [b]Anxiety. [c]Total self-efficacy.

*$p \leq .05$.

Table 8

Stepwise Multiple Regression of Teacher Effectiveness on Self-Efficacy and Anxiety

Independent Variable	Multiple R	R^2	Adjusted R^2	R^2 Change	F of Equation	Beta In (Step 1)
Step 1						
TRAITTO[a]	.2330	.0543	.0426	.0543	4.6494*	- .0755

Note: N = 83.

[a]Anxiety.

*p≤.05.

measured at nominal and ordinal levels. Spearman's rank order correlation was used for these analyses. No significant differences were found for marital status or race when correlated with nursing self-efficacy, teacher effectiveness, anxiety and perceptions of learning. A weak correlation (r_s=.23), which was significant ($p \leq .05$), was found between the clinical area to which students were assigned and levels of nursing self-efficacy. However, this relationship accounts for only 5% (r_s^2=.05) of the shared variance between these variables.

No significant differences were found between students' ages and major study variables. Significant differences were found between study variables and other demographic data. Table 9 displays these results. As one would expect, a moderate correlation exists between total contact with the instructor and perceptions of teacher effectiveness. Of the two variables indicating this relationship, the number of hours per week in the clinical area is the stronger and accounts for 14% of the shared variance between these two factors.

Often schools of nursing in private universities are smaller than those in public universities. A smaller class size affords an opportunity for greater faculty-student interaction which may influence students' levels of self-efficacy and anxiety as well as perceptions of teacher effectiveness and learning in the clinical environment. Therefore, the sample was divided into two groups, students attending private universities and those attending public universities. To investigate whether or not a difference in overall class size would affect study variables t-tests were computed. No significant differences were found were found between major study variables and type of university.

Table 9

Pearson Correlation Coefficients for Selected Demographic Characteristics and Study Variables

Variables	SELFNSG[a]	SELFEFTO[b]	TRAITTO[c]	TEACHTO[d]	STEWTO[e]
Age	.03 (r^2 = .0009)	.08 (r^2 = .0064)	.17 (r^2 = .0289)	-.07 (r^2 = .0049)	.07 (r^2 = .0049)
Wk in Clinical Area	-.02 (r^2 = .0004)	-.02 (r^2 =.0004)	-.14 (r^2 = .0196)	.11 (r^2 = .0121)	.24* (r^2 = .0576)
Hrs/Wk of Clinical	.08 (r^2 = .0064)	.05 (r^2 = .0025)	.05 (r^2 = .0025)	.37** (r^2 = .1369)	-.02 (r^2 = .0004)
# Teacher Contact/Wk	-.07 (r^2 = .0049)	.04 (r^2 = .0016)	-.26* (r^2 = .0676)	.31** (r^2 = .0961)	-.07 (r^2 = .0081)

Note: N = 83.

[a]Nursing Self-efficacy. [b]Total Self-efficacy. [c]Anxiety. [d]Teacher Effectiveness. [e]Learning.

*$p \leq .05$. **$p \leq .01$.

Also of interested to the researcher were variables most predicted of nursing self-efficacy and of anxiety. Therefore, additional multiple regression analyses were conducted. When stepwise multiple regression was performed to predict nursing self-efficacy, two variables, total self-efficacy and perceptions of learning entered the regression equation. Together, these variables accounted for 59% of the variance in nursing self-efficacy scores. Results of the step-wise multiple regression are presented in Table 10.

To predict anxiety, stepwise multiple regression was performed. Three variables entered the equation: nursing self-efficacy, teacher effectiveness and perceptions of learning. Together, these variables account for 31% of the variance in anxiety scores. Table 11 displays the results of stepwise analysis.

Chapter Summary

In this chapter, data to answer the research questions and hypotheses posed in Chapter 1 were presented. Descriptive statistics provided information about characteristics of study participants. Correlation and multiple regression analyses were used to answer the research question and test the hypotheses. Additional study findings were also presented.

Table 10

Stepwise Multiple Regression of Nursing Self-efficacy on Major Study Variables

Independent Variables	Multiple R	R^2	Adjusted R^2	R^2 Change	F of Equation	Beta In (Step 1)	Beta In (Step 2)
Step 1							
SELFEFTO[a]	.6658	.4433	.4364	.4433	64.49*	.2283	.5096
Step 2							
STEWTO[b]	.7674	.5889	.5786	.1456	57.29*	---	.4123

Note: N = 83.

[a]Total Self-efficacy. [b]Perceptions of learning.

* $p \leq .000$.

Table 11

Stepwise Multiple Regression of Anxiety on Major Study Variables

Independent Variables	Multiple R	R^2	Adjusted R^2	R^2 Change	F of Equation	Beta In (Step 1)	Beta In (Step 2)	Beta In (Step 3)
Step 1								
SELFNSG[a]	.4897	.2398	.2304	.2398	25.55*	.4897	.4731	.3023
Step 2								
TEACHTO[b]	.5259	.2765	.2584	.0367	15.28*	---	.1923	.1942
Step 3								
SEFLEFTO[c]	.5595	.3131	.2870	.0366	12.00*	---	---	.2563

Note: N = 83.

[a]Nursing Self-efficacy. [b]Teacher Effectiveness. [c]Total Self-efficacy.

* $p \leq .000$.

CHAPTER 5

STUDY SUMMARY

This descriptive correlational study was conducted to describe the relationships among senior baccalaureate nursing students' levels of self-efficacy and anxiety, perceptions of clinical teacher effectiveness and their perceptions of learning in the clinical environment. Four instruments were used in the study: Self-efficacy Scale (SES) by Sherer et al., the Trait Anxiety subscale of Spielberger's State Trait Anxiety Inventory (STAI-T), Knox and Mogan's Nursing Clinical Teacher Effectiveness Inventory (NCTEI), and Slater-Stewart's Stewart Evaluation of Nursing Scale (Stewart Scale). As no instruments which measure self-efficacy specific to nursing were found in the literature, the SES was modified to include 13 items measuring nursing self-efficacy. The sample was composed of 83 female, senior baccalaureate nursing students enrolled in public and private universities whose nursing programs are accredited by the National League for Nursing (NLN).

Summary of Findings

Multiple regression analysis was used to answer the research question: What are the relationships among baccalaureate nursing students' degree of self-efficacy, levels of anxiety, perceptions of clinical instructor effectiveness and their perceptions of learning in the clinical environment? Since the researcher was also interested in students' levels of self-efficacy specific to nursing, the nursing self-efficacy subscale of the SES was treated as an additional independent variable. When all variables were regressed upon students'

perceptions of learning in the clinical environment, the independent variables accounted for 39% of the variance in scores for students' perceptions of learning. The strongest contribution to the equation was nursing self-efficacy ($R^2 = .39$). When stepwise regression was performed, nursing self-efficacy was the only variable that entered the equation and accounted for 36% of the shared variance.

Four hypotheses were tested. These hypotheses were:

1. Baccalaureate nursing students with high levels of self-efficacy will report higher perceptions of learning in the clinical environment.
2. Baccalaureate nursing students with high anxiety levels will report lower perceptions of learning in the clinical environment.
3. Baccalaureate nursing students with high levels of self-efficacy and low levels of anxiety will perceive their clinical instructor as effective in the clinical environment.
4. Baccalaureate nursing students who perceive their clinical instructor as effective will report higher perceptions of learning in the clinical environment.

Pearson's product moment correlation coefficient was used to test hypotheses one, two and four. Multiple regression was used to test hypothesis three. Hypothesis one supported. Hypotheses two, three and four were not supported.

In addition to the above hypotheses, stepwise multiple regression was performed to investigate which major study variables would be most predictive of nursing self-efficacy and of anxiety. When stepwise multiple regression was performed to predict

nursing self-efficacy, two variables entered the equation: total self-efficacy and students' perceptions of learning. These variables accounted for 59% of the shared variance. In stepwise multiple regression analysis to predict anxiety, three variables entered the equation: nursing self-efficacy, teacher effectiveness and perceptions of learning. These variables accounted for 31% of the shared variance.

Discussion

Findings of this study suggest that it is students' perception of self-efficacy specific to the performance of nursing tasks, or fulfilling the role of nurse, rather than anxiety or whether or not the student perceives the clinical instructor as effective, which is the most predictive factor of students' perceptions of learning in the clinical environment. This is congruent with Bandura's Social Learning Theory (SLT) which emphasizes the importance of the constructs of self-regulation and self-efficacy in the learning process (Bandura, 1977, 1979; and Grusec, 1992). Findings also support the notion that beliefs of self-efficacy are task specific (Bandura, 1986; Greene & Miller, 1996, and Pajares, 1996). Indeed, students themselves cite effort and ability to explain their successes and failures (Davidhizar & McBride, 1985).

Variables most predictive of nursing self-efficacy were total self-efficacy and perceptions of learning. Finding total self-efficacy to be one of the two variables most predictive of nursing self-efficacy would certainly be expected. Perceptions of learning as the other major predictor of nursing self-efficacy tends to confirm the strong relationship between these two constructs. The stronger the belief in their ability to fulfill the role of nurse, the more likely students are to perceive that they are learning more in the clinical

area.

An intervening variable that may affect students' nursing self-efficacy beliefs is their work experience as nursing assistants or Licensed Practical Nurses (LPNs) during their nursing education. Many students seek employment as nursing assistants during their Junior year in the nursing program and continue working in this role throughout their Senior year. Also, in recent years, nursing students have been permitted to take the licensure exam to practice as LPNs after completing the Junior year in the nursing program. Some students take this exam and are employed as LPNs. Although the number of students in this study who were employed in either of these roles is unknown, it is reasonable to expect that many were employed in a health care setting as nursing assistants or LPNs. This work experience in a clinical environment would provide additional learning experiences in the health care setting which may have increased their feelings of nursing self-efficacy.

Interestingly, the perceived effectiveness of the clinical instructor was not found to be as importance a factor in students' perceptions of learning as this researcher had thought it would be. This is surprising given previous research that has confirmed the importance of the clinical instructor's influence upon students' development of self-confidence as nurses (Campbell, Larrivee, Field, Day and Reutter, 1994; Flagler, Loper-Powers, and Spitzer, 1988; Knox & Mogan, 1985; and Windsor, 1987). Research has also confirmed that approval of the instructor is an important ingredient in the development of the nursing student's sense of self-efficacy (Ford-Gilboe, Laschinger, Laforet-Fliesser, Ward-Griffin, and Foran, 1997; Windsor, 1987; and Wilson, 1994).

> Instructors were identified as crucial in shaping students' attitudes to nursing. The most influential instructors were those who encouraged students to believe in themselves and what they were doing. . . .Instructors also shaped students' attitudes to [sic] nursing by assuring them that they would 'make it' and be the nurses of the future, the ones who will go out there and make the difference, the ones who will be patient advocates. . . (Campbell, et al., 1994, p. 1128).

Perhaps the instrument used to measure instructor effectiveness did not fully capture all dimensions of the role of the clinical instructor. Although the NCTEI does address teacher behaviors classified as "interpersonal relations", the instrument does not specifically address faculty conduct related to development of students' nursing self-efficacy. Ways in which faculty behaviors influence students' nursing self-efficacy beliefs is an area for further research.

These findings may also be related to characteristics of the population. Data were collected in the mid to latter portion of the Spring semester of students' senior year in the nursing program. This was within ten weeks, or less, of students' anticipated date of graduation. At this point in their academic careers, students may have become more self-directed learners and less dependent upon the clinical instructor for their learning than they were at an earlier point in their nursing education. Therefore, the educational level of the students may be an intervening variable which influenced both students' nursing self-efficacy levels and their perceptions of clinical instructor effectiveness.

Also, at the time of data collection, 63% of students were assigned to community health settings for their clinical experience and 73% had been assigned to the agency for 4 to 5 weeks. In general, community health agencies limit the number of students that can be assigned to the agency simultaneously; consequently, faculty must use two or more

community health agencies and travel among the facilities to meet with students. For this reason, students work primarily with staff nurses in the various agencies and have less contact with the instructor during the clinical time than they do when in an acute care setting. Over a period of several weeks, a student develops a rapport with the agency staff, especially with the nurse who serves as preceptor for the student, and comes to rely upon the staff for assistance. Thus, students in community health settings may tend to view the staff nurses as the individuals from whom they learn, rather than the actual clinical instructor. The large number of students assigned to community health settings may have skewed the data.

One also wonders how characteristics of the clinical environment affected relationships among students' self-efficacy beliefs, level of anxiety, perceptions of clinical instructor effectiveness and their perceptions of learning. The environment of an acute care setting, for example, an intensive care unit, is certainly more anxiety-provoking than that of a community health setting in which patients typically are seen for chronic ailments or in non-emergent situations. A significant, though weak, correlation was found between levels of nursing self-efficacy and the clinical area to which students were assigned. Had the majority of students in this study been in an acute care setting, would they have had higher levels of anxiety, lower levels of nursing self-efficacy and perceived the instructor as more influential in their learning?

The influence of trait anxiety, as opposed to state anxiety, upon students' perceptions of learning was investigated. One would expect students with high levels of anxiety to report lower perceptions of learning. However the relationship was positive

rather than the expected inverse relationship. This may due to a curvilinear relationship between the two variables and characteristics of the population. A significant, moderate correlation (r=.40) between anxiety and perceptions of learning was identified. Students in this study tended to have moderate levels of trait anxiety ($\bar{x}$=62.01), rather than high levels of trait anxiety, and were a homogenous group (SD=9.30). It is well-known that moderate anxiety enhances learning, while high levels of anxiety hinder learning. These findings support the notion that moderate anxiety facilitates learning. It would be helpful to track students' anxiety levels across time to determine if fluctuations in anxiety levels occur as they progress through the nursing curriculum.

Interestingly, when major study variables were utilized in stepwise multiple regression to predict anxiety, three variables entered the equation. These variables were: nursing self-efficacy, teacher effectiveness and perceptions of learning. Given the concepts of self-efficacy and anxiety, one would expect nursing self-efficacy to be associated with anxiety. Individuals who tend to be anxious may also have doubts about their ability to perform tasks. Also, as previously stated, a relationship between anxiety and perceptions of learning was found; therefore, it is reasonable to expect perceptions of learning to be predictive of anxiety.

Prior research has documented that the clinical instructor's presence is anxiety-provoking for students (Kleehammer, Hart & Keck, 1990; Kushnir, 1986; Oerman & Standfest, 1997; Pagana, 1988; and Williams, 1993) and usually this is due to the evaluative dimension of the instructor's role. No studies were found that examined relationships between students' anxiety and their perceptions of teacher effectiveness.

Therefore, this relationship is an area that needs further study.

Implications

Findings from this study have many implications for nurse educators. Learning is not the result of an isolated event. Conditions in the environment and the behavior of others affect the learner's behavior, and vice versa (Bandura, 1977). Learning new behaviors is also influenced by the individual's history of successes and failures in other learning situations (Bandura).

> Beliefs about self-efficacy arise from the individual's history of achievement in a domain, from observation of what others are able to accomplish, from attempts of others to mold feelings of self-efficacy through persuasion, and from consideration of one's own physiological state during a task as a reflection of personal capabilities and limitations (Grusec, 1992, p. 782).

Therefore, it is vital for faculty to have an understanding the importance of self-efficacy to facilitate students' learning in the clinical arena.

Self-efficacy influences that which an individual will attempt and the amount of effort he will expend to learn the behavior. An individual who has a negative self-efficacy perception may become preoccupied with himself and aroused emotionally. This creates distraction and hinders an effective performance (Bandura, 1977, 1978; and Grusec, 1992, and Tedesco, 1986). If the individual's self-efficacy perception is positive, more complex tasks may be attempted and learning enhanced (Bandura, 1977, 1978; Brown & Schulte, 1987; Perry, 1988; and Rosenstock, Strecher, & Becker, 1988). The student who is having difficulty in the clinical area, or is viewed as unmotivated or lazy by the clinical instructor, may actually be a student who is filled with self-doubt about his or her ability to master the knowledge and skills needed to become a nurse. An understanding of the

concept of general self-efficacy, and nursing self-efficacy, will enable the clinical instructor to look beyond behavior that gives the appearance of lack of motivation, or willingness to work, to identify the student with low nursing, or total, self-efficacy. Faculty could utilize instruments from this study to evaluate the student's level of anxiety, nursing self-efficacy and total self-efficacy level and perceptions of learning. These instruments would be of value in helping the student and faculty to assist the individual in developing a positive sense of self-efficacy and to be successful in the nursing program.

Approval of the instructor is an important ingredient in the development of the nursing student's sense of self-efficacy (Ford-Gilboe, Laschinger, Laforet-Fliesser, Ward-Griffin, and Foran, 1997; Windsor, 1987; and Wilson, 1994). Nursing faculty must be ever mindful of the effects, both positive and negative, their comments have upon students' sense of both nursing, and general, self-efficacy, which in turn influences students' perceptions of learning in the clinical arena. Use of the NCTEI would yield information faculty could use to change behaviors viewed as ineffective by students. Due to the dynamics of the faculty/student relationship, students would be more apt to be straightforward when students' anonymity is preserved.

Modeling is also a predominant concept in SLT. Bandura (1977) states that most learning occurs through observation of others. The clinical instructor is the first, and usually most prominent, role model for the nursing student (Campbell, et al., 1994). Indeed, Rauen (1974) found that the instructor's modeling of behaviors related to the role of nurse was identified by nursing students as the most important element in their socialization to the role. Therefore, the clinical instructor must be aware of the influence

his or her behaviors have upon students in the clinical area. Preferably, the instructor is effective in modeling appropriate behaviors that facilitate students' learning. However, the ineffective teacher also influences students' learning by demonstrating behaviors that do not enhance the nursing role and also hinders students' learning.

Learning occurs primarily in the social setting (Khan & Cangemi, 1979; Merriman & Caffarella, 1991) and vicariously from observation of others (Bandura, 1977). The individual learns not only socially acceptable behaviors, but also those behaviors that are socially unacceptable to the group (Bandura; and Khan & Cangemi). For the nursing student, the clinical setting is the place in which interactions with other health care providers occur. Nursing students work more closely with staff nurses than other health care providers and these staff nurses are powerful, influential role models. In fact, if the student is uncomfortable with the clinical instructor for whatever reason, the student will turn to the staff nurse for instruction and advice about patient care. Feedback from the staff nurse is important to the student's sense of competence (Wilson, 1994). Staff nurses may be positive or negative role models for nursing students. Students may learn either appropriate or inappropriate behaviors by observation of staff nurses' interactions with patients and other health care providers and staff nurses' performance of psychomotor skills. Therefore, nursing faculty must consider the availability of staff nurses who will be good role models when selecting clinical sites.

Certainly the clinical environment is a complex milieu and it is one that is anxiety-provoking. While a mild level of anxiety facilitates learning, high levels of anxiety hinder learning. Nursing students' who are anxious may be those who have the most negative

sense of self-efficacy. Anxious students are sometimes hesitant to approach the clinical instructor and ask questions for fear of being thought "stupid" and may also view the instructor's role as that of evaluator rather than teacher (Wilson, 1994). The role of the clinical instructor in this instance is to assist anxious students in identification and development of effective coping strategies to reduce anxiety and increase a sense of nursing self-efficacy.

Conclusions

In conclusion, measures of the variables in this study were shown to be valid predictors of senior baccalaureate nursing students' perceptions of learning in the clinical environment. Nursing self-efficacy was the variable that contributed most to students' perceptions of learning. Further investigation could lend support to the importance of this concept in nursing education. Additional research should also be conducted to track the development of nursing self-efficacy as the student progresses through the curriculum and the instructor's role in development of students' nursing self-efficacy. Of interest would be to determine if there is a difference in students' sense of nursing self-efficacy during the junior and senior years and if so, how this difference interacts with anxiety, perceptions of clinical instructor effectiveness and perceptions of learning in the clinical environment.

Recommendations for Further Study

Based upon findings from this study there are several recommendations for further study:

1. Replicate the study using a larger sample drawn from a more geographically diverse area.

2. Replicate the study and include males and career ladder students.
3. Conduct a longitudinal study and compare junior and senior baccalaureate students' nursing self-efficacy, general self-efficacy, anxiety, perceptions of clinical teacher effectiveness and perceptions of learning in the clinical environment.
4. Investigate the role of the clinical instructor in the formation of students' beliefs of nursing self-efficacy.
5. Investigate relationships among characteristics of the clinical environment, students' nursing self-efficacy beliefs, anxiety, perceptions of clinical instructor effectiveness and their perceptions of learning in the clinical environment.
6. Investigate relationships between students' anxiety and perceptions of clinical instructor effectiveness.
7. Conduct a longitudinal study to investigate changes in anxiety levels and affects upon perceptions of learning over time.

Chapter Summary

The purposes of this study were to investigate the relationships among senior baccalaureate nursing students' beliefs of self-efficacy, levels of anxiety, perceptions of clinical teacher effectiveness and their perceptions of learning in the clinical environment and to furnish information nursing faculty may utilize to facilitate students' learning in the clinical arena. Study findings were identified and discussed. Implications for nurse educators and recommendations for further study were also presented.

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APPENDICES

APPENDIX A

Institutional Review Board Permission to Conduct Study



The University of Oklahoma

OFFICE OF RESEARCH ADMINISTRATION

February 4, 1997

Ms. Alma Rambo
2433 N.W. 54th Street
Oklahoma City, Oklahoma 73112

Dear Ms. Rambo:

Your research proposal, "Relationships Among Self-Efficacy, Anxiety, Perceived Clinical Teacher Effectiveness and Senior Baccalaureate Nursing Students' Perceptions of Learning in the Clinical Area," has been reviewed by Dr. E. Laurette Taylor, Chair of the Institutional Review Board, and found to be exempt from the requirements for full board review and approval under the regulations of the University of Oklahoma-Norman Campus Policies and Procedures for the Protection of Human Subjects in Research Activities.

Please remember, however, to not initiate your study at an institution until you have received and put on file that institution's approval. You also need to put a signature line on the informed consent form for the participants to sign.

Should you wish to deviate from the described protocol, you must notify me and obtain prior approval from the Board for the changes. If the research is to extend beyond twelve months, you must contact this office, in writing, noting any changes or revisions in the protocol and/or informed consent form, and request an extension of this ruling.

If you have any questions, please contact me.

Sincerely yours,

Karen M. Petry
Administrative Officer
Institutional Review Board

KMP:sg
97-088

cc: Dr. E. Laurette Taylor, Chair, IRB
Dr. Connie Dillon, EL&PS

1000 Asp Avenue, Suite 314, Norman, Oklahoma 73019-0430 PHONE (405) 325-4757 FAX (405) 325-6029

APPENDIX B

School of Nursing Consent

[Date]

[Name of Dean or Department Chairperson]
[Name of School of Nursing]
[School Address]
[City, State, Zip Code]

Dear [Name of Dean or Chairperson]

Your permission is requested to recruit senior nursing students to participate in a research study entitled, "Relationships Among Self-efficacy, Anxiety, Perceived Clinical Teacher Effectiveness and Senior Baccalaureate Nursing Students' Perceptions of Learning in the Clinical Environment". I am a graduate student at the University of Oklahoma and the study is being conducted as my doctoral dissertation. The purpose of the study is to explore factors which facilitate or hinder nursing students' learning in the clinical area.

If you agree to permit the inclusion of students at [Name of University] in this study, you will be asked to provide the name of a member of the faculty member whom I may contact to schedule a time for me to come and distribute the enclosed questionnaire to senior students. Completion of the questionnaire will not involve use of class time. Students will be asked to complete the questionnaire anonymously and return it in the envelope provided. I will remain in the classroom and collect the questionnaires when students have completed them.

A code number has been assigned to student questionnaires to permit grouping of data by type of school, private or state supported, for statistical purposes only. Any data obtained that could be identified with the university will remain confidential and be disclosed only with your permission. I will contact you per telephone to talk with you about my study and to answer any questions you may have.

If you agree to permit the inclusion of [Name of University] in the study, please return the enclosed consent form in the envelope provided. Thank you in advance for your consideration of my study.

Sincerely,

Alma Rambo, R.N., M.S.

Supervising Professor:
Connie Dillon, Ph.D.
College of Education, University of Oklahoma

AGENCY APPROVAL FORM

The research study entitled, "Relationships Among Self-efficacy, Anxiety, Perceived Clinical Teacher Effectiveness and Senior Baccalaureate Nursing Students' Perceptions of Learning in the Clinical Environment", has been discussed with me by Alma Rambo, the investigator. Approval is granted for Alma Rambo to recruit students enrolled in senior level nursing courses at [Name of School] to participate in this study.

_____ _____

Signature Date

_____

Title

APPENDIX C

Oral Description of Study

UNIVERSITY OF OKLAHOMA

ORAL DESCRIPTION OF STUDY

Title of Project: Relationships Among Self-efficacy, Anxiety, Perceptions of Clinical Instructor Effectiveness and Baccalaureate Nursing Students' Perceptions of Learning in the Clinical Environment

Oral Description of Study:

I am Alma Rambo. I am currently working on my doctorate in adult education and higher learning at the University of Oklahoma. As part of my requirements, I am conducting a study about characteristics of nursing students and their perceptions of learning in the clinical environment. I would like you to participate in the study today by completing a series of questionnaires. This will require about 30 minutes of your time.

All questionnaires are numbered so that each can be compared with the other questionnaires completed by the same student. No personally identifying information is on the questionnaires. So that you can be assured of total anonymity, do not write your name, nor I.D. number, on any questionnaire. Data will be stored in the researcher's office for one year and will then be destroyed by shredding. You are free to withdraw from the study at any time. No medical service nor compensation will be provided to you by the university as a result of injury from participation in the study. Whether you choose to participate, or not, will not affect your grade in this course nor standing in the university.

By completing the questionnaire, your consent to participate in the study is implied. You will also receive a consent form that you may keep. Do you have any questions?

APPENDIX D

Consent Form

UNIVERSITY OF OKLAHOMA-NORMAN CAMPUS

INFORMED CONSENT TO PARTICIPATE IN STUDY

You are invited to participate in a study about characteristics of nursing students and their perceptions of learning in the clinical environment. I am a graduate student at the University of Oklahoma, College of Education. This study is being done as my dissertation research and is under the supervision of Dr. Connie Dillon, a member of the graduate faculty at the University of Oklahoma.

The purpose of the study is to better understand what helps nursing students' learn in the clinical environment. If you are willing to participate in this study, please complete the enclosed questionnaire and return it in the attached envelope before you leave the classroom. There are five parts to the questionnaire and it will require about 30 minutes of your time. So that you can be assured of total anonymity, DO NOT write your name on the questionnaire. The questionnaire is numbered for statistical purposes only.

Participating in this study will not cause any foreseeable risks or discomfort to you. Potential benefits of participation in this study include identification of ways in which faculty may help nursing students learn during the clinical experience. You will receive no monetary compensation if you decide to participate in this study.

You are under no obligation to participate in this study. Completing and returning the questionnaire will be taken as evidence of your willingness to participate and your consent to have the information used for the purposes of this study. Your decision to participate, or not to participate, will not affect your future relations with the University of Oklahoma, your standing in [Name of School], nor your grade in this course.

If you have any questions about the study, or would like a summary of the results of this study, you can contact Alma Rambo at 341-2980, Ext. 5190, or my supervising professor, Connie Dillon, Ph.D, at 325-4202.

Thank you for your help with this study. Your responses will make an important contribution to the study.

_____

Signature

APPENDIX E

Permission to Use Instruments

State-Trait Anxiety Inventory for Adults

Self-Evaluation Questionnaire
STAI Form Y-1 and Form Y-2

Permission to reproduce up to 200 copies for one year starting from date of purchase
January 15, 1997

Developed by Charles D. Spielberger
in collaboration with R.L. Gorsuch, R. Lushene, P.R. Vagg, and G.A. Jacobs

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THE UNIVERSITY OF BRITISH COLUMBIA

School of Nursing
T206-2211 Wesbrook Mall
Vancouver, B.C. Canada V6T 2B5
Tel: (604) 822-7417
Fax:(604) 822-7466

July 17th 1995

Alma Rambo
2433 North West 52th St
Oklahoma City, Oklahoma
7312 USA

Dear Ms Rambo:

Thank you for your interest in our study. We are glad to share our instrument and any further information you might require for your thesis. In return, we would like to receive a brief summary of your findings including your reliability and validity data.

Included please find the requested instrument and some of our reliability and validity data. Should you require further validity/ reliability data from others who have used the instrument, please let me know. You might be interested to know that NCTEI has been used nationally and internationally and has been translated into foreign languages.

Should you require further information, please feel free to phone or fax me (Tel# (604) 739-9679; Fax # (604) 822-7466).

A charge of $ 5.00 payable to the School of Nursing, University of B.C. will help to cover the cost of duplicating, mailing and handling

Yours sincerely

Judith Mogan

Judith Mogan RN MA
Assistant Professor Emerita

UNIVERSITY OF OKLAHOMA

CONSENT FOR THE USE OF RESEARCH INSTRUMENTS

Title of Project: Relationships Among Self-efficacy, Anxiety, Perceived Clinical Instructor Effectiveness and Baccalaureate Nursing Students' Perceptions of Learning in the Clinical Area

Consent for the Use of Instrument for Research:

I have received a brief introduction to the purpose of the research project, which is to describe the relationships among self-efficacy, anxiety, perceptions of clinical instructor effectiveness and baccalaureate nursing students' perceptions of learning in the clinical area. I give my permission as author for the following instrument to be used in research for the completion of the dissertation:

1. Stewart Evaluation of Nursing Scale

Doris M. Stewart 9/14/96

Authorized Signature Date

Estel Mumbrue 9/14/96

Witness Date

APPENDIX F

Demographic Questionnaire

Demographic Questionnaire

DIRECTIONS: I would like to ask a few questions about you, so I can describe the students who participated in the study.

1. What is your age?
   (Fill in the blank)

   _____ YEARS OF AGE

2. What is your current marital status?
   (Circle the number)

   1. MARRIED
   2. WIDOWED
   3. DIVORCED
   4. SEPARATED
   5. NEVER MARRIED

3. At the time you were accepted into the nursing program at this university, did you have a license to practice as a:

licensed practical nurse?	registered nurse?
1. YES	1. YES
2. NO	2. NO

4. What race do you consider yourself?
   (Circle the number)

   1. CAUCASIAN / WHITE
   2. AFRICAN AMERICAN / BLACK
   3. ASIAN / ORIENTAL
   4. MEXICAN AMERICAN / HISPANIC
   5. NATIVE AMERICAN / AMERICAN INDIAN
   6. OTHER, PLEASE SPECIFY _____

5. Which of the following best describes the clinical area in which you are working as a nursing student right now?
   (Circle the number)

   1. MEDICAL-SURGICAL / ADULT HEALTH
   2. COMMUNITY HEALTH / PUBLIC HEALTH
   3. CRITICAL CARE
   4. OBSTETRICS / WOMEN'S HEALTH
   5. PEDIATRICS
   6. PSYCHIATRIC / MENTAL HEALTH
   7. OTHER, PLEASE SPECIFY _____

6. How many weeks have you been in the clinical agency during the course in which you are currently enrolled?
(Circle the number)

    1. ONE
    2. TWO
    3. THREE
    4. FOUR
    5. FIVE
    6. SIX
    7. OTHER, PLEASE SPECIFY _____

7. How many hours each week do you spend in a clinical setting? (Do not include time spent in pre- or post-conference or engaging in self-preparation.)
(Fill in the blank)

    _____ HOURS PER WEEK

8. On the average, how many times each week do you have direct contact with your clinical instructor while you are in the clinical setting?
(Circle the number)

    1. LESS THAN 2 TIMES
    2. 2-4 TIMES
    3. 5-7 TIMES
    4. 8-10 TIMES
    5. MORE THAN 10 TIMES

9. Have you been assigned to your current clinical instructor at any time in the past for a patient-related clinical experience?
(Circle the number)

    1. NO
    2. YES, How many times have you been assigned to this teacher? _____

APPENDIX G

The Self-Efficacy Scale

Self-Efficacy Questionnaire

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and circle the number that is MOST descriptive of you.

		Strongly Disagree	Somewhat Disagree	No Opinion	Somewhat Agree	Strongly Agree
1.	I'm confident about the decisions I make concerning my patients' care.	1	2	3	4	5
2.	One of my problems is that I cannot get down to work when I should.	1	2	3	4	5
3.	I feel insecure about my ability to take care of patients.	1	2	3	4	5
4.	If I can't do a job the first time, I keep trying until I can.	1	2	3	4	5
5.	When I set important goals for myself, I rarely achieve them.	1	2	3	4	5
6.	I believe I can master the knowledge I need to know to graduate from nursing school.	1	2	3	4	5
7.	I am confident I will be a good nurse.	1	2	3	4	5
8.	I avoid facing difficulties.	1	2	3	4	5
9.	If I met someone interesting who is hard to make friends with, I'll soon stop trying to make friends with that person.	1	2	3	4	5
10.	When I have something unpleasant to do, I stick to it until I finish it.	1	2	3	4	5
11.	I feel insecure when I am asked to explain something about my patient's care.	1	2	3	4	5
12.	When I decide to do something, I go right to work on it.	1	2	3	4	5
13.	I would rather not work with patients whose nursing care is complicated.	1	2	3	4	5
14.	When trying to learn something new, I soon give up if I am not initially successful.	1	2	3	4	5
15.	I avoid trying to learn new things when they look too difficult for me.	1	2	3	4	5
16.	I am more confident taking care of patients whose medical diagnosis is familiar to me.	1	2	3	4	5

		Strongly Disagree	Somewhat Disagree	No Opinion	Somewhat Agree	Strongly Agree
17.	I do not handle myself well in social gatherings.	1	2	3	4	5
18.	I feel insecure about my ability to do things.	1	2	3	4	5
19.	I am confident that I know enough to make the right decisions when taking care of patients.	1	2	3	4	5
20.	I give up easily.	1	2	3	4	5
21.	I do not seem capable of dealing with most problems that come up in life.	1	2	3	4	5
22.	It is difficult for me to make new friends.	1	2	3	4	5
23.	I am confident of my ability to meet the needs of my patients.	1	2	3	4	5
24.	I am a self-reliant person.	1	2	3	4	5
25.	If I see someone I would like to meet, I go to that person instead of waiting for him or her to come to me.	1	2	3	4	5
26.	When unexpected problems occur, I don't handle them well.	1	2	3	4	5
27.	Failure just makes me try harder.	1	2	3	4	5
28.	I have acquired my friends through my personal abilities at making friends.	1	2	3	4	5
29.	When I make plans, I am certain I can make them work.	1	2	3	4	5
30.	I feel insecure when I do a procedure with a patient.	1	2	3	4	5
31.	Once I've had an opportunity to practice a nursing skill, I know I can do it by myself with a patient.	1	2	3	4	5
32.	When I'm trying to become friends with someone who seems uninterested at first, I don't give up easily.	1	2	3	4	5
33.	I give up on things before completing them.	1	2	3	4	5

		Strongly Disagree	Somewhat Disagree	No Opinion	Somewhat Agree	Strongly Agree
34.	When unexpected situations occur during clinical, I don't handle them well.	1	2	3	4	5
35.	I feel insecure when patients ask me questions about their health problems.	1	2	3	4	5
36.	If something looks too complicated, I will not even bother to try it.	1	2	3	4	5
37.	I am capable of dealing with most problems that arise with my patients.	1	2	3	4	5
38.	Once I learn a nursing skill, I feel confident I can do it again.	1	2	3	4	5

APPENDIX H

Spielberger State-Trait Anxiety Inventory

Spielberger State-Trait Inventory, T-Trait Subscale

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of each statement to indicate how you generally feel.

		Almost Never	Sometimes	Often	Almost Always
1.	I feel pleasant.	1	2	3	4
2.	I feel nervous and restless.	1	2	3	4
3.	I feel satisfied with myself.	1	2	3	4
4.	I wish I could be as happy as others seem to be.	1	2	3	4
5.	I feel like a failure.	1	2	3	4
6.	I feel rested.	1	2	3	4
7.	I am "calm, cool and collected."	1	2	3	4
8.	I feel that difficulties are piling up so that I cannot overcome them.	1	2	3	4
9.	I worry too much over something that really doesn't matter.	1	2	3	4
10.	I am happy.	1	2	3	4
11.	I have disturbing thoughts.	1	2	3	4
12.	I lack self-confidence.	1	2	3	4
13.	I feel secure.	1	2	3	4
14.	I make decisions easily.	1	2	3	4
15.	I feel inadequate.	1	2	3	4
16.	I am content.	1	2	3	4
17.	Some unimportant thought runs through my mind and bothers me.	1	2	3	4
18.	I take disappointments so keenly that I can't put them out of my mind.	1	2	3	4
19.	I am a steady person.	1	2	3	4
20.	I get in a state of tension or turmoil as I think over my recent concerns and interests.	1	2	3	4

APPENDIX I

Nurse Clinical Teacher Effectiveness Inventory

Nurse Clinical Teacher Effectiveness Inventory

DIRECTIONS: Picture the clinical teacher you have now. For each statement circle the number which indicates how descriptive the behavior is of this individual.

		Does Not Describe	Rarely Describes	Seldom Describes	Sometimes Describes	Often Describes	Usually Describes	Always Describes
1	Explains clearly.	1	2	3	4	5	6	7
2	Emphasizes what is important.	1	2	3	4	5	6	7
3	Stimulates student interest in the subject.	1	2	3	4	5	6	7
4	Remains accessible to students.	1	2	3	4	5	6	7
5	Demonstrates clinical procedures and techniques.	1	2	3	4	5	6	7
6	Guides students' development of clinical skills.	1	2	3	4	5	6	7
7	Provides specific practice opportunity.	1	2	3	4	5	6	7
8	Offers special help when difficulties arise.	1	2	3	4	5	6	7
9	Is well prepared for teaching.	1	2	3	4	5	6	7
10	Enjoys teaching.	1	2	3	4	5	6	7
11	Encourages active participation in discussion.	1	2	3	4	5	6	7
12	Gears instruction to students' level of readiness.	1	2	3	4	5	6	7
13	Quickly grasps what students are asking or telling.	1	2	3	4	5	6	7
14	Answers carefully and precisely questions raised by students.	1	2	3	4	5	6	7
15	Questions students to elicit underlying reasoning.	1	2	3	4	5	6	7
16	Helps students organize their thoughts about patient problems.	1	2	3	4	5	6	7
17	Promotes student independence.	1	2	3	4	5	6	7
18	Demonstrates clinical skill and judgement.	1	2	3	4	5	6	7
19	Demonstrates communication skills.	1	2	3	4	5	6	7
20	Reveals broad reading in his/her area of interest.	1	2	3	4	5	6	7

		Does Not Describe	Rarely Describes	Seldom Describes	Sometimes Describes	Often Describes	Usually Describes	Always Describes
21	Discusses current developments in his/her field.	1	2	3	4	5	6	7
22	Directs students to useful literature in nursing.	1	2	3	4	5	6	7
23	Demonstrates a breadth of knowledge in nursing.	1	2	3	4	5	6	7
24	Recognizes own limitations.	1	2	3	4	5	6	7
25	Takes responsibility for own actions.	1	2	3	4	5	6	7
26	Is a good role model.	1	2	3	4	5	6	7
27	Makes specific suggestions for improvement.	1	2	3	4	5	6	7
28	Provides frequent feedback on students' performance.	1	2	3	4	5	6	7
29	Identifies students' strengths and limitations objectively.	1	2	3	4	5	6	7
30	Observes students' performance frequently.	1	2	3	4	5	6	7
31	Communicates expectations of students.	1	2	3	4	5	6	7
32	Gives students positive reinforcement for good contributions, observations or performance.	1	2	3	4	5	6	7
33	Corrects students' mistakes without belittling them.	1	2	3	4	5	6	7
34	Does not criticize students in front of others.	1	2	3	4	5	6	7
35	Provides support and encouragement to students.	1	2	3	4	5	6	7
36	Is approachable.	1	2	3	4	5	6	7
37	Encourages a climate of mutual respect.	1	2	3	4	5	6	7
38	Listens attentively.	1	2	3	4	5	6	7
39	Shows a personal interest in students.	1	2	3	4	5	6	7
40	Demonstrates empathy.	1	2	3	4	5	6	7
41	Demonstrates enthusiasm.	1	2	3	4	5	6	7
42	Is a dynamic and energetic person.	1	2	3	4	5	6	7

		Does Not Describe	Rarely Describes	Seldom Describes	Sometimes Describes	Often Describes	Usually Describes	Always Describes
43	Has self-confidence.	1	2	3	4	5	6	7
44	Is self-critical.	1	2	3	4	5	6	7
45	Is open-minded and nonjudgmental.	1	2	3	4	5	6	7
46	Has a good sense of humor.	1	2	3	4	5	6	7
47	Appears organized.	1	2	3	4	5	6	7

APPENDIX J

Stewart Evaluation of Nursing Scale

Stewart Evaluation of Nursing Scale

DIRECTIONS: Circle the number that best describes YOUR evaluation of your performance in the clinical area.

		Poor	Fair	Average	Good	Best
1.	Conducts purposeful systematic health/illness interviews with the client.	1	2	3	4	5
2.	Makes discriminating observations.	1	2	3	4	5
3.	Collects information relevant to the client's situation.	1	2	3	4	5
4.	Uses reliable and valid sources in assessing strengths, limitations and needs.	1	2	3	4	5
5.	Uses resources to clarify data.	1	2	3	4	5
6.	Recognizes that the individual is part of a family and community.	1	2	3	4	5
7.	Performs physical examinations.	1	2	3	4	5
8.	Interacts with client and family to determine psychological reactions to conditions.	1	2	3	4	5
9.	Identifies psychological, socio-economic, socio-cultural, physiological and environmental stressors of client/family.	1	2	3	4	5
10.	Identifies the resources mobilized by the individual in his effort to adapt.	1	2	3	4	5
11.	Uses scientific rationale in analyzing data.	1	2	3	4	5
12.	Makes reasonable conclusions based on significant relationships in the data.	1	2	3	4	5
13.	Validates inferences empirically.	1	2	3	4	5
14.	Identifies client's needs.	1	2	3	4	5
15.	Establishes priority needs.	1	2	3	4	5
16.	Works collaboratively with other team members in analysis of data.	1	2	3	4	5
17.	Identifies resources of client, family, environment and community.	1	2	3	4	5
18.	Defines realistic goals to meet health needs.	1	2	3	4	5
19.	Plans nursing action to meet nursing goals.	1	2	3	4	5
20.	Plans nursing care in accordance with the developmental level of the client.	1	2	3	4	5

		Poor	Fair	Average	Good	Best
21.	Consults with client and other members of the health team in planning care.	1	2	3	4	5
22.	Selects the methods and resources for achieving the goals.	1	2	3	4	5
23.	Participates with the client and members of other members of other disciplines using resources to implement the health plan.	1	2	3	4	5
24.	Carries out therapeutic nursing action to meet identified nursing goals.	1	2	3	4	5
25.	Uses the nurse-client relationship to achieve therapeutic goals.	1	2	3	4	5
26.	Demonstrates the skills in giving physical care necessary to achieve the nursing goals.	1	2	3	4	5
27.	Carries out nursing actions with a knowledge of underlying scientific rationale.	1	2	3	4	5
28.	Carries out nursing actions with safety and accuracy.	1	2	3	4	5
29.	Promotes and provides a safe, comfortable and therapeutic environment.	1	2	3	4	5
30.	Displays sincerity, gentleness, understanding and interest while giving care.	1	2	3	4	5
31.	Uses self therapeutically.	1	2	3	4	5
32.	Works with groups consistent with theories of group dynamics.	1	2	3	4	5
33.	Incorporates knowledge of personality development into care of clients.	1	2	3	4	5
34.	Teaches client, family and co-workers in accordance with principles teaching and learning.	1	2	3	4	5
35.	Coordinates activities that provide for continuity of care.	1	2	3	4	5
36.	Respects the individual's/family's right to freedom of choice.	1	2	3	4	5
37.	Respects individual's/family's beliefs, attitudes, and values.	1	2	3	4	5
38.	Supports the client's need to maintain his relationship with family and friends.	1	2	3	4	5

		Poor	Fair	Average	Good	Best
39.	Recognizes the individual's behavior as his way of expressing or meeting his needs.	1	2	3	4	5
40.	Records nursing activities and client outcomes accurately and comprehensively.	1	2	3	4	5
41.	Supports other members of the health team in carrying out their actions.	1	2	3	4	5
42.	Uses and or provides experiences which contribute to the growth of each participant in patient care.	1	2	3	4	5
43.	Identifies outcome criteria required for goal attainment.	1	2	3	4	5
44.	Utilizes all sources of information about client.	1	2	3	4	5
45.	Indicates extent to which goals are attained.	1	2	3	4	5
46.	Documents nursing activities and effects of activities.	1	2	3	4	5
47.	Continues with the nursing process.	1	2	3	4	5

APPENDIX K

Original Nursing Self-efficacy Items

Original Nursing Self-Efficacy Items

1. I'm confident about the decisions I make concerning my patients' care.
2. I believe I can master the information I need to know to graduate from nursing school.
3. I try to avoid taking care of patients whose care is complex.
4. I believe I know enough to make good clinical decisions.
5. I feel insecure when I do a procedure with a patient.
6. One I've had an opportunity to practice a procedure at least once, I know I can do it by myself with a patient
7. When unexpected events occur during clinical, I don't handle them well.
8. I feel insecure when patients ask me questions about their health problems.
9. I am capable of dealing with most problems that arise during clinical.
10. Once I've learned a nursing skill, I feel confident I can do it.
11. I feel insecure about my ability to take care of patients.
12. I am confident I will be a good nurse.
13. I feel insecure when someone asks me to explain something about my patient's care.
14. I feel insecure when I take care of a patient whose medical diagnosis is new to me.
15. When I plan nursing interventions for patients, I am certain that I can carry out the interventions.
16. When unexpected situations occur during clinical, I don't handle them well.
17. I feel confident in performing a new nursing skill without practice or direct supervision.

APPENDIX L

Nursing Self-efficacy Item Modifications

Nursing Self-efficacy Item Modifications Based on Evaluation for Content Validity

Original Items	Modified Items
I'm confident about the decisions I make concerning my patients' care.	
I believe I can master the information I need to know to graduate from nursing school.	I believe I can master the knowledge I need to know to graduate from nursing school.
I try to avoid taking care of patients whose care is complex.	I would rather not work with patients whose care is complex.
I believe I know enough to make good clinical decisions.	I am confident that I know enough to make the right decisions when taking care of patients.
I feel insecure when I do a procedure with a patient.	
Once I've had an opportunity to practice a procedure at least once, I know I can do it by myself with a patient	Once I've had an opportunity to practice a procedure, I know I can do it by myself with a patient.
When unexpected events occur during clinical, I don't handle them well.	Deleted
I feel insecure when patients ask me questions about their health problems.	
I am capable of dealing with most problems that arise during clinical.	I am capable of dealing with most problems that arise with my patients.
Once I've learned a nursing skill, I feel confident I can do it.	Once I learn a nursing skill, I feel confident I can do it again.
I feel insecure about my ability to take care of patients.	
I am confident I will be a good nurse.	

Original Items	Modified Items
I feel insecure when someone asks me to explain something about my patient's care.	I feel insecure when I am asked to explain something about my patient's care.
I feel insecure when I take care of a patient whose medical diagnosis is new to me.	I am more confident taking care of patients whose medical diagnosis is familiar to me.
When I plan nursing interventions for patients, I am certain that I can carry out the interventions.	I am confident of my ability to meet the needs of my patients.
When unexpected situations occur during clinical, I don't handle them well.	
I feel confident in performing a new nursing skill without practice or direct supervision.	I feel confident in performing a new nursing skill without direct supervision.