

Anxiety of Nursing Students During
A Clinical Rotation in ICU or Maternity

by

J. Ruth Gilpin, R.N.
B.S.N., Northwest Missouri State University, 1978

Submitted to the School of
Nursing and the Faculty of the
Graduate School of the University
of Kansas in partial fulfillment of
the requirements for the degree
of Master of Nursing.

Redacted Signature

Chairman, Associate Professor

Redacted Signature

Redacted Signature

Redacted Signature

Redacted Signature

Committee Members

Redacted Signature

Dean, School of Nursing

March 6, 1984
Date Thesis Accepted

Abstract

High levels of anxiety are known to be detrimental to learning. Research has shown that staff nurses assigned to Intensive Care Units (ICU) experience more sources of anxiety than staff nurses in other clinical areas. Nursing students rotating through ICU have the same potential for increased anxiety but no research has examined anxiety of the nursing student in ICU. A comparative correlative study was conducted to determine if there was a significant difference in the change in state anxiety between nursing students during a clinical rotation to ICU and those assigned to a maternity unit, to determine if there was a relationship between nursing students' propensity to anxiety and their anxiety reaction during clinical rotations, and to determine sources of perceived anxiety during the two rotations. Four research questions formed the basis of the investigation.

Data were collected from 19 senior nursing students who were randomly assigned to an ICU rotation and 19 who were randomly assigned to a maternity rotation. The instruments used were Spielberger's State-Trait Anxiety Inventory, the Objects Content Test, and a Demographic Data Sheet. Data were analyzed with t-tests, correlation coefficients, and contingency tests. All tests were conducted at the 0.05 level of significance.

The analyses revealed that nursing students in the ICU rotation experienced significantly higher levels of state anxiety than nursing students in the maternity rotation on the first clinical day, but by the sixth clinical day the two groups showed no difference in state anxiety. A pearson product moment correlation revealed that students in both

groups who scored high on trait anxiety also scored high on state anxiety on the first clinical day. The sources of perceived anxiety were similar in both groups. The students in the ICU group consistently identified a greater number of specific sources of anxiety than students in the maternity group. The ICU group identified technical procedures as the most stressful sources of anxiety. The students in the maternity group identified activities related to care of mothers in labor and normal care of infants as the most stressful sources of anxiety. Implications for nursing and further research were given.

ACKNOWLEDGEMENTS

I would like to recognize and express my appreciation to those who have helped me finish this research project. A loving thanks to my family for their support, help, and encouragement.

I would like to thank my thesis advisor, Virginia Cassmeyer for her thoughtfulness and for the time and effort she used to help me. I would also like to thank my other committee members for their helpful guidance and suggestions. A special thanks to Mabel Welch who read my research additional times and offered suggestions and support.

I would like to thank Norma Tolo for administering all the questionnaires. This took a lot of time from her busy schedule and I appreciate it.

A number of other people I want to thank are the Maternity instructors, Ann Moran and Patti Carmack, for their cooperation, my typist, Belinda Grinstead for the good job with typing and the director of the school, Marilyn Meinert for allowing this study to be conducted. Also a special thanks to Donna Nolf, Kay Dunlap, Judy Nelson and other friends who helped and supported me.

Last, but not least, I would like to thank the students who participated in the study. I appreciate their cooperation and the time they spent filling out the questionnaires.

Table of Contents

Abstract	ii
Acknowledgements	iv
Table of Contents	v
List of Tables	vii
Chapters	
I. Introduction	1
Statement of the Problem	5
Purpose of Study	5
Research Questions	6
Definition of Terms	6
Contribution to Nursing	7
II. Review of Literature	8
Theories of Anxiety	8
Effects of Anxiety on Learning	11
Anxiety of Nursing Staff in ICU	12
Anxiety of Nursing Students	15
III. Methodology	20
Subjects	20
Setting	20
Instruments	20
Spielberger State-Trait Anxiety Inventory	21
Objects Content Test	22
Demographic Data Sheet	23
Data Collection Procedure	23
Data Analysis Procedure	24
Statement of Risk	24
IV. Analysis and Discussion of Data	26
Data Analysis	28
Research Question 1	29
Research Question 2	32
Research Question 3	32
Research Question 4	35

List of Tables

Table

1.	Demographic Data	28
2.	Correlation Matrix	29
3.	Trait Anxiety of ICU and Maternity	30
4.	Preclinical State Anxiety of ICU and Maternity Group	30
5.	State Anxiety on First Clinical Day of ICU and Maternity	31
6.	State Anxiety of Sixth Clinical Day of ICU and Maternity	32
7.	Observed and Expected Frequencies of Perceived Sources of Anxiety for Students in ICU and Maternity	36
8.	Number One Source of Anxiety for the ICU and Maternity Groups	37
9.	Number Two Source of Anxiety for the ICU and Maternity Groups	38
10.	Number Three Source of Anxiety for the ICU and Maternity Groups	39

Chapter

IV. Analysis and Discussion of Data - continued	
Discussion of the Data Analysis	40
Research Question 1	40
Research Question 2	41
Research Question 3	41
Research Question 4	42
Incidental Findings	43
V. Summary, Conclusions, Limitations, and Recommendations	45
Conclusions	47
Limitations	48
Implications for Nursing	48
Recommendations for Further Research	49
References	50
Appendices	53
A. Spielberger State-Trait Anxiety Inventory (STAI Form Y-1)	53
(STAI Form Y-2)	54
B. Objects Content Test	55
C. Demographic Data Sheet	56
D. Spielberger Authorization Letter	57
E. Permission from Director of School	58
F. Explanation of Study to Students	59
G. Raw Data From Subjects in ICU	60
H. Raw Data From Subjects in Maternity	61

Chapter I

Introduction

The importance of anxiety as a powerful influence in our society is increasingly recognized. Manifestations of current concern with anxiety phenomena are reflected in the arts, literature, science, religion, and in many other facets of our culture (Spielberger & Gorsuch, 1966). Kimmell (1977) states that we live in an age of anxiety, and we are constantly searching for security, while suffering from the fear that we are inadequate to deal with the complexities of our world.

Anxiety has been described as a nonspecific, vague, objectless, diffuse apprehension accompanied by feelings of helplessness and uncertainty (Freud, 1946; Sullivan, 1953). May (1950) viewed anxiety as apprehension caused by a threat to some value which the individual holds essential to existence. He also stated that the capacity to experience anxiety is innate, while the events or stimulus conditions that evoke it are learned. Anxiety is normal, however, if it is proportionate to the objective danger and does not involve repression.

Spielberger, Gorsuch, and Lushene (1970) have divided anxiety into two specific types, state anxiety and trait anxiety. State anxiety is defined as a transitory emotional state or condition that is characterized by subjective, consciously perceived feelings of tension and apprehension and heightened autonomic nervous system activity. State anxiety may vary in intensity and fluctuate over time. Trait anxiety refers to a relatively stable individual difference in anxiety proneness. That is, it refers to differences between people in their tendencies to respond to situations perceived as threatening with elevations in state anxiety.

Nurses in general have a great potential for having increased anxiety because they care for patients who are facing stressful situations (Gentry, Foster, & Froehling, 1972; Scully, 1980). Holderby (1979) states that when patients react with fear, anxiety, anger, and hostility, nurses are on the front line of these strong emotions. Nurses are faced not only with the physical needs of their patients but also with heavy demands for empathy, sympathy, and compassion. Nurses are often expected, or expect themselves, to do the impossible in the way of providing comfort and care to the sick and dying (Gentry et. al., 1972). A belief common among many nurses is that their job is to preserve life. Failure to do ones job can result in feelings of tension, uneasiness, or even unconscious anger at the patient. It is as if the patient is at fault because he or she does not respond to treatment. In addition to the anxieties that result from trying to meet patients needs, nurses have many other stressors that can lead to anxiety. Some forces external to nursing that may cause anxiety are lack of staff, dealing with physicians, lack of support services, and conflict with administration (Scully, 1980).

For nurses working in intensive care settings, the problem of anxiety is supposedly even more pronounced (Hay & Oken, 1972; Vreeland & Ellis, 1969). Several groups of researchers have analyzed the causes of stress and anxiety in the Intensive Care Unit (ICU). Early articles identified potential anxiety producing components such as rapid turnover of staff, complicated machinery, narrow patient care focus, great responsibility, conflict with administration and the crisis atmosphere (Koumans, 1965; Strauss, 1968). One study (Turner, King & Craddock, 1975) emphasized the importance of environment, particularly noise in terms of patient well being and stress potential for nurses.

Two studies (Hay & Oken, 1972; Vreeland & Ellis, 1969) examined the stresses of ICU nurses. The researchers noted that the ICU nurses' situation seemed paradoxical because warmth and sympathy were expected along with objectivity and assertiveness. Nurses were also said to function under anxiety, which increased the potential for mistakes, decreased problem solving ability, and lessened effectiveness.

Nursing students rotating through ICU have potentially the same stressors as staff. Some studies (Booker & Rouhiainen, 1981; Jones, 1978; Quinlan & Blatt, 1972; Sobol, 1978) have reported on anxiety and stress in the nursing student, but none of this research has specifically examined the anxiety of the nursing student in ICU. Understanding the anxiety of different clinical experiences is important since the anxiety level of the student influences learning (Hay & Oken, 1972; Sarason, 1957; Spielberger et. al., 1970).

McKay (1978) reports that nursing literature is consistent in its identification of the stresses of nursing education. An exception to this is the literature of the seventies where few references to the anxiety and stress commonly experienced by nursing students have been presented. McKay said if we do not believe that nursing students today experience stress and anxiety, then we are blind both to the evidence of history and to the subjective experience of students as they progress through the curriculum. Jones (1978) in a study of 50 nursing students in the United Kingdom concluded that students are continually placed in situations that are stressful and therefore anxiety-provoking.

Anxiety on the part of undergraduate students of nursing in relation to clinical courses can seriously interfere with learning (Blainey, 1982; Hay & Oken, 1972; Spielberger, et. al., 1970). Peplau (1963) identified

four levels of anxiety that include mild, moderate, severe, and panic levels. Periods of mild general anxiety are not detrimental to learning and may even serve as a positive motivating influence and hence augment learning. It is recognized that anxiety provides an energy and this energy can be used to assist learning. However, if the level of anxiety is intensified to moderate or severe, then learning and function are impaired. As anxiety increases to a moderate level, individuals see, hear, and grasp less detail in their surroundings. They may focus on a few details and ignore the rest. At the severe level of anxiety there may be disturbances in thought patterns and at the panic level the person's attention cannot be drawn to notice surrounding events and automatic behaviors occur.

Anxiety is manifested by a variety of behaviors, some behaviors are obvious, but others are vague and subtle. Recognizing anxiety in a student is uncomplicated if the student manifests apprehension in obvious ways such as speaking rapidly, exhibiting a short attention span, making simple mistakes, or showing nervousness and tenseness. Blainey (1982) states, however that students may seek to mask the anxiety, perhaps as a means of coping with it. If clinical instructors cannot identify anxiety early in the student's clinical rotation then interventions to alleviate the anxiety may not be started and student's learning and development may be adversely affected. One way of objectively measuring anxiety in students who may not manifest anxiety behaviors (covert anxiety) may be the self rating-scales of trait and state anxiety developed by Spielberger and Gorsuch (1966). The trait anxiety scale measures a relatively stable individual difference in anxiety proneness and may

possibly be used to predict state anxiety.

Statement of the problem

Recognizing, intervening, and assisting students to gain control over anxiety is an important and challenging component of clinical instruction. Several problems, however, have been recognized that need to be solved before this can be completely accomplished. First, the clinical rotations with the potential for producing moderate to severe levels of anxiety that interfere with learning must be identified. It is this investigator's experience that most faculty feel the ICU rotation is one of the most anxiety provoking clinical rotations, but this assumption has not been supported by research. Secondly, if the ICU is a major anxiety provoking clinical rotation, the causes of this anxiety must be identified. The causes may or may not be the same as those which are anxiety provoking situations for staff. Finally, the faculty member must be able to identify students with high anxiety levels in ways other than by observation of behavior, since such behavior can be masked.

Purpose of Study

The purpose of this study was threefold.

1. To determine if there was a significant difference in the change in state anxiety between student nurses assigned to an ICU and those assigned to another clinical area.
2. To determine if there was a relationship between student nurses propensity to anxiety (trait anxiety) and their anxiety reaction (state anxiety) when assigned to an ICU rotation and to a maternity rotation.
3. To explore student nurses' perceptions of sources of anxiety during the ICU and another clinical rotation.

Research Questions

The research questions are:

1. Will nursing students experience higher levels of state anxiety during a clinical rotation in ICU than during a clinical rotation in Maternity nursing?
2. Will nursing students who display high trait anxiety also display high state anxiety on the first day of clinical rotation to ICU and Maternity?
3. What are the students' sources of perceived anxiety during the ICU and Maternity rotations?
4. What are the three most stressful sources of anxiety for the students during the ICU rotation and Maternity rotation?

Definition of terms

These terms were defined for this study as follows:

1. Stress is changes in conditions or circumstances of the environment that imply a degree of objective danger and the subjective appraisal or interpretation of a situation as personally dangerous (Spielberger, 1972).
2. Trait Anxiety is a relatively stable personality characteristic that predisposes an individual to perceive a wide range of circumstances as threatening and respond with elevations in state anxiety (Spielberger, 1972).
3. State Anxiety is a transitory response to a specific stressful event characterized by subjective feelings of apprehension and heightened autonomic nervous system arousal (Spielberger, 1972).
4. ICU rotation involves student experience for six days in a nine bed intensive care unit with special equipment for critically

- ill patients. The patients may have surgical complications, respiratory complications, or injuries from an accident.
5. Maternity rotation involves student experience for 27 days on a 35 bed maternity floor. The students will be involved with prepartum and postpartum patients as well as patients during labor and delivery. Students also work with normal newborns. The student will be evaluated at the completion of six days of clinical.

Contribution to Nursing

Since moderate to severe levels of anxiety may seriously decrease learning, (Blainey, 1982) this study will contribute to nursing education in that it will determine whether or not the student's experience in the Intensive Care Unit (ICU) causes moderate to severe levels of anxiety as compared to another type of experience. This is important because if the ICU is more anxiety provoking than other clinical rotations, instructors can use interventions that decrease the student's anxiety and that may increase the student's learning.

A second way this study can contribute to nursing education is by determining if covert anxiety can be measured in the student by using a standardized test. A third contribution is that it may identify sources of anxiety for the student in the ICU area and in the maternity area.

All of these contributions will help to determine whether or not a special orientation needs to be planned for students before the ICU rotation or maternity rotation. Data will also be provided on what should be included in the orientation.

Chapter II

Review of Literature

The sheer volume of research on anxiety makes it impossible to do a complete review of theories and studies related to anxiety. There is lack of agreement regarding the nature of anxiety, the particular stimulus conditions that arouse it and the sorts of past experiences that make individuals more or less vulnerable. This chapter focuses on theories of anxiety, effects of anxiety on learning, anxiety of nursing staff in ICU, and anxiety of nursing students.

Theories of Anxiety

Review of the literature on the development and meaning of anxiety focused on the following theoretical schools of thought: Psychoanalytic (Freud), Interpersonal (Peplau, Sullivan), Existential (May, Tillich), Learning theory (Mowrer) and Psychobiological (Cannon). Also reviewed was Spielberger's theory of state and trait anxiety.

Psychoanalytic. Freud (1946) regarded anxiety as an unpleasant state or condition that is "felt." He stated that anxiety was distinguishable from other unpleasant affective states such as anger, grief, or sorrow by its unique combination of phenomenological and physiological qualities. In his early theories, Freud believed that anxiety resulted from repressed libidinal excitation. He later modified this view and defined anxiety as a signal that indicated the presence of a dangerous situation. He then differentiated between objective anxiety and neurotic anxiety largely on the basis of whether the source of the danger was from external or internal sources.

Interpersonal. Four levels of anxiety were identified by Peplau (1963). The first level, mild anxiety, is associated with tensions of day-to-day living that increase alertness, enlarge the perceptual field, and increase learning. The second level, moderate anxiety, increases the focus on immediate concerns, blocks out the periphery, and narrows the perceptual field. The individual experiences selective inattention, but can attend to more if directed to do so. The third level, severe anxiety, reduces the perceptual field greatly. The individual focuses on specific detail and nothing else. Behavior is aimed at getting relief, requiring the person to expend a great deal of effort to focus on another area. The fourth level, panic, is associated with awe, dread, and terror. Details are exaggerated by the person, diminishing the ability to do things, even with direction. On this level personality disorganization occurs and function as a rational human being is at a standstill. There is also increased motor activity and decreased ability to relate to others.

An "interpersonal theory" by Sullivan (1953) described anxiety as an intensely unpleasant state or tension arising from experiencing disapproval in interpersonal relationships. Anxiety distorts the individual's perception of reality, narrows the range of stimuli perceived and causes the unacceptable parts of the personality to be dissociated.

Existentialist. May (1950) stated that anxiety is viewed as apprehension cued off by a threat to some value that one holds essential to his existence as a personality. He also stated that the capacity to experience anxiety is innate, while the events or stimulus conditions that evoke it are learned. He states that anxiety is a normal phenomenon if it is proportionate to the objective danger and does not involve

repression.

An existentialist point of view of anxiety was also described by Tillich (1952). He defined anxiety as a type of fear resulting from the threat of nothingness or non-being. He noted that a common feature of most theories of anxiety is an emphasis on unresolved conflicts between structural elements of the personality.

Learning Theory. Mowrer (1950) proposed that anxiety results from acts that the individual has committed but wishes that he had not. If an individual behaves irresponsibly, with too much self-indulgence and too little self-restraint, then anxiety is experienced.

Psychobiological Theory. Carter (1981) stated that Walter Cannon was the first to pinpoint the significance of the physiological effects of an intense feeling as of anxiety. He also noted that the responses of the body to intense emotions are designed to prepare the body for "fight or flight." The brain cortex sends a stimulus to the sympathetic branch of the autonomic nervous system and to the adrenal glands. Norepinephrine and epinephrine are secreted and induces cardiovascular respiratory and other metabolic changes that provide the energy needed to act. In addition those parts of the body needed for defensive action are increased whereas those not needed are decreased.

Types of Anxiety. Spielberger, Gorsch, and Lushene (1970) have divided anxiety into two specific types, state anxiety and trait anxiety. State anxiety is defined as a transitory emotional state or condition that is characterized by subjective, consciously perceived feelings of tension and apprehension and heightened autonomic nervous system activity. State anxiety may vary in intensity and fluctuate over time. Trait anxiety refers to a relatively stable individual difference

in anxiety proneness. That is, it refers to differences between people in the tendency to respond to situations perceived as threatening with elevations in state anxiety. For this study, anxiety as conceptualized by Spielberger et al (1970) has been selected. Spielberger et al (1970) developed a State-Trait Anxiety Inventory (STAI). The STAI is made up of two separate self-reporting scales for measuring state anxiety (A-State) and Trait anxiety (A-Trait). When administering the A-Trait scale subjects are instructed to respond as they generally feel. When administering the A-State scale subjects are instructed to respond as they feel now. STAI norms were based on a sample of 231 undergraduate students. After further testing and deletion, the final version was validated with 197 undergraduate students.

Effects of anxiety on learning

The effects of anxiety on learning have been studied by several researchers. This section reviews that research.

Mouley (1973) stated that when anxiety reaches an increased level it can result in deterioration of performance, especially in the finer areas of creativity, problem solving, and subtle human relations. Individual's reactions to severe anxiety may take on different forms but tend to be similar from the standpoint of behavior becoming ineffectual, stereotyped, and generally compulsive.

Basowitz, Grinker, Korchin, and Persky (1955) summarized a number of studies ranging from field soldiers in combat to clinical investigations of human beings and animals. These studies showed that as anxiety mounts the person's cognitive field is narrowed, so that focus is so completely on the barrier and the inaccessibility of the goal that the person is blind to alternative pathways and substitute goals. As a

result the rational process of deliberation and choice is interfered with.

Carter and Mills (1982) stated that Sarason's research on test anxiety shows that on tasks requiring flexible and creative orientation, less anxious students were more spontaneous, more productive, and showed better judgement while highly anxious students were superior on tasks requiring caution and alertness to error. However the latter group tended to have difficulty when they had to reorganize their thoughts creatively or to improvise.

Gaudry and Spielberger (1971) in their research described the influence of anxiety upon learning, concept formation, and academic achievement. They found that:

1. Those learners who are high in trait anxiety will exhibit state anxiety elevations more frequently than low trait anxiety individuals.
2. High trait anxiety learners are more likely to respond to stressful situations with an increase in state anxiety, especially in situations that involve some threat to self-esteem.
3. The high trait anxiety learner tends to perform more poorly than persons who are low in trait anxiety under conditions that impose "ego-involving" instructions.

Anxiety of Nursing Staff in ICU

In a review of the literature, this investigator found multiple articles that described, from the author's perception, the sources and quantity of anxiety in the ICU nursing staff (Bilodeau, 1973; Cassem, 1975; Friedman, 1973; Holsclaw, 1965). These authors have identified stressors of anxiety as being patients' conditions, equipment, hectic

pace, and relationships with administration, personnel, patients, and families.

Only a few researchers have reported studies on anxiety of the nursing staff in ICU. Vreeland and Ellis (1969) in their study identified stressors of ICU nurses. In a four bed ICU the investigators used observation, self-report, and interview to identify nurses personal sources of anxiety. The effect of the patient's altered physiology or the psychological impact of the patient's illness was quickly and most frequently identified by the nurses. Vreeland and Ellis went on to list other stressors, such as technical equipment, insuring smooth working relationships and effective communication with other members of the health team, insecurity in the nurse's knowledge or skill, anxiety of the family, and achieving balance between being firm and objective, while being warm and sensitive to the patient.

The origins of stress as perceived by ICU nurses was identified by Huckaby and Gagla (1979). Their study consisted of 46 female registered nurses who functioned as full-time staff nurses in ICU and had a minimum of six months work experience in the ICU setting. Nurses from six hospitals were given a questionnaire that used a situational format containing four main categories with 16 components. The four major categories were interpersonal communication problems, knowledge base, environmental conditions, and patient care. Each of the 16 components were represented by two situational questions. The nurses were asked to answer each question by identifying and rank-ordering the situations presented according to the situation or nurse's degree of perceived stress. Of the four categories, patient care ranked first, followed by interpersonal communication, environmental conditions, and knowledge

base. Of the separate components, workload and amount of physical work ranked first followed by death of a patient, communication problems, family needs, and use of the equipment. As a result of this study Huckaby and Gagla felt that the category of patient care presented the ICU nurse with threatening situations that are controlled externally rather than internally and are therefore more difficult to direct and control.

Gentry, Foster, and Froehling (1972) reported results of a study designed to determine response to stress among ICU and non-ICU nurses. The study measured the levels of psychologic and emotional responses of nurses working in various ICU and non-ICU settings. Three ICU and three non-ICU units were used. The three ICU units consisted of a medical center coronary care unit (CCU), an acute care unit/recovery room, and a Veterans' Administration hospital coronary care unit. The non-ICU settings were three general medical-surgical wards. A total of 34 nurses took part. The psychologic tests used were the Tennessee Self-Concept Scale, the Zung Self-Rating Depression Scale, Buss-Durke Hostility Inventory, a general personality assessment (MMPI) and a Job Satisfaction Scale. Results showed that nurses from the medical center coronary care unit and ICU showed significantly more depression, irritability, resentment, and verbal aggression than did non-ICU nurses and nurses from a Veterans' Administration CCU. Again this study showed similar stress factors that cause anxiety such as workload, too much responsibility, poor communication with physicians, and limited working space. The investigators concluded that ICU stress depended more on environmental situations than on nurses' personalities.

A study that compared anxiety/stress among nurses employed in

various units were gathered as part of a study of self-disclosure among patients and nurses (Johnson, 1979). The four types of hospital units used in this study were medical, surgical, psychiatric, and critical care. The 70 nurses that took part in the study were RNs and LPNs who worked full time. Sixty-eight patients ranging in age from 21 to 60 participated in the study. Two instruments were used in this study, the Jourard Self-Disclosure Questionnaire and the State-Trait Anxiety Inventory. The results showed that state and trait anxiety were lower in the critical care nurse than in medical and surgical nurses but higher than in psychiatric nurses. These findings, taken with those of other studies (Gentry et al., 1972; Huckaby & Gagla, 1979; Vreeland & Ellis, 1969) suggest conflicting results about degrees of anxiety of staff in critical care areas. Because instruments and settings varied, few conclusions can be made, except the need for further research.

Anxiety of Nursing Students

Nursing students rotating through ICU have potentially the same sources of stress as staff. Some studies (Booker & Rouhiainen, 1981; Jones, 1978; Quinlan & Blatt, 1972) have reported on anxiety and stress in the nursing student, but none of the research has specifically examined the anxiety of the nursing student in an ICU. Understanding the anxiety of different clinical experiences is important since the anxiety level of the student influences learning (Hay & Oken, 1972; Sarason, 1957; Spielberger et al., 1970).

A major study of stresses in American nursing education was done by Fox, Diamond, Walsh, Knapf, and Hodgins (1963). The data analyses were based on data collected from approximately 3,000 nursing students enrolled in 18 diploma and five baccalaureate degree nursing programs.

The research design encompassed four stages. The first stage identified the satisfaction and stress potential of selected aspects of the nursing school experience. The second stage determined the magnitude of the relationship between general aspects of the nursing school experience and the specifics within the general aspect. The third stage identified schools in which specific aspects were less stressful than expected. The fourth stage identified factors and practices related to increased satisfaction and/or decreased stress through interviews with students in the schools identified in stage three. Student sources of anxiety that were identified were coordination of class and clinical schedules, level of ability expected of students by clinical instructors, current feelings about nursing as a profession, working relationships in the hospital, and rules and policies.

Davitz (1972) reported in her study that 36 out of 37 second and third year diploma students in Nigeria identified stressful events concerned with their clinical experience. The greatest cause of stress and anxiety was the evaluation of their professional performance, followed by patient hostility toward them, interpersonal relationships, and concern about how to handle a new situation. This study was compared with the study by Fox and colleagues (1963) of 3,000 nursing students in America to determine if stresses of nursing students, specific to nursing crossed cultures. This study used a self-report approach in which students were asked to write about their stressful experiences during the training period. Students were asked to describe an incident that was stressful for them, and explain how they reacted to and felt about the situation. Both American and Nigerian students reported clinical experiences as the most stressful. American students showed stress in

the three other categories relating to academic performance, personal experience, and social relationships, but the Nigerian students did not. The reason given for this difference was selection of nursing students. In Nigeria they are picked from the top academic and social group while in America this is not necessarily true.

Garrett, Manuel, and Vincent (1976) patterned their research design after Fox et al's. and Davitz's studies using the critical incident technique. Data was collected near the end of the academic year from sophomore, junior, and senior nursing students of a four year collegiate program. This study included 133 nursing students between the ages of 18 and 23. Within the clinical area, physical care of the patient and interpersonal relationships with the clinical instructors were identified as the most stressful. This study supported Fox et al. (1963) and Davitz (1972) studies that stress from clinical experiences was the dominant theme.

In 1972 Quinlan and Blatt studied the performance of 26 student nurse volunteers, half of whom were randomly assigned to a rotation in surgical nursing (doing a highly structured non-personal task) and half of whom were randomly assigned to a rotation in psychiatric nursing (doing a loosely structured interpersonal task). Two criterion measures were examined; the instructor's grades and a four-item scale of reported anxiety and stress in the educational setting. The group was tested four to eight weeks after the beginning of the rotation in surgical nursing and psychiatric nursing in their second year of schooling. The surgical group reported higher levels of anxiety, but both experiences had been described by instructors as two of the most stressful in the nursing curriculum.

Parkes (1980) compared student stress on medical and surgical floors. This study included 101 female nursing students from two hospitals during their first year of school. The average age of the subjects was 20 years. The majority were of Irish or British descent. A wide range of assessment measures were used. All students were measured on both medical and surgical units. The results showed higher levels of anxiety and depression and lower work satisfaction on medical floors. The explanation given for this was that surgical nursing emphasizes the "instrumental" role of the nurse with emphasis on active intervention and use of technical skills for the student to master. In contrast, a patient on the medical floor is more likely to stay longer and have less improvement. The affective role that is important in medical nursing is likely to impose more difficult emotional demands on the students.

One study of stress in nursing students compared hospital based programs with college based programs (Booker & Rouhiainen, 1981). This study used second year nursing students and compared 20 students from a tertiary (basic) nursing program to 20 students from a hospital based program. A written questionnaire was designed to measure the sources and levels of stress of the clinical experience. The identified sources of high levels of stress were academic pressures, work load, communication, preparation, very ill/dying patients, support, and interpersonal relationships. A comparison of the levels of stress between the two sample groups showed that hospital-based nursing students experienced higher levels of stress than the tertiary nursing students in the areas of workload and support.

Self-Actualization and the student's response to stress was studied by Sobol (1978). A sample of 144 senior nursing students from four

baccalaureate schools were tested for self-actualization and state and trait anxiety at a time low in stress. State and trait anxiety was measured again at two high-stress times (prior to clinical evaluation and prior to final course examination). The prediction that the level of self-actualization is a factor in the differential perception of evaluative events as stressful, was confirmed. The results also verified the theoretical claim that the level of trait anxiety is a significant predictor of the response to the stress of evaluative events.

In summary, there are many theories about anxiety. Theories have been divided into psychoanalytic (Freud), interpersonal theory (Peplau & Sullivan), existential theory (May & Tillich), learning theory (Mowrer) and types of anxiety (Spielberger et al.). Effects of anxiety on learning have been described by many authors (Basowitz et al., 1955; Gaudry & Spielberger, 1971; Mouley, 1973; Sarason, 1957). It has been stated that anxiety narrows the person's cognitive field, causes a deterioration of performance in areas of creativity, problem solving, and subtle human relations. According to research studies (Gentry et al., 1972; Huckaby & Gagla, 1979) the nursing staff in ICU have an increased level of anxiety. Several causes listed for the increased anxiety are rapid turnover of staff, complicated machinery, great responsibility, conflict with administration, and a crisis atmosphere. Nursing students rotating through ICU have potentially the same sources of anxiety as nursing staff. Some studies (Davitz, 1972; Fox et al., 1963, Parkes, 1980) have reported on anxiety of nursing students but none have reported on anxiety of the nursing student in ICU.

Chapter III

Methodology

This investigation was designed as a comparative correlative study to determine if there was a significant difference in state anxiety between nursing students assigned to an ICU and those assigned to another clinical area, to determine if there was a relationship between nursing students propensity to anxiety (trait anxiety) and their anxiety reaction (state anxiety) when assigned to an ICU rotation and to a maternity rotation, and to explore nursing students perception of sources of anxiety during the ICU and another clinical rotation. This chapter includes a discussion of subjects, settings, instruments, data collection procedures, data analysis procedure, and statement of risk.

Subjects

The sample for this study was a convenience sample of 38 senior nursing students. Nineteen senior nursing students who were randomly assigned to Medical-Surgical Nursing III with a clinical rotation to the ICU and 19 students who were randomly assigned to Maternity nursing participated in the study.

Setting

The setting was a diploma school of nursing in a moderately sized mid-western city. Clinical experience for the students at this diploma school was provided in a 600 bed private hospital. The Maternity rotation was on a 35 bed maternity floor and the ICU rotation was in a nine bed ICU.

Instruments

Instruments that were used in this study were Spielberger's State-

Trait Anxiety Inventory (STAI) (Appendix A), Objects Content Test (OCT) (Appendix B), and a Demographic Data Sheet (Appendix C). Each of these are described in the next section.

Spielberger State-Trait Anxiety Inventory (STAI). The STAI is a self report measure which was originally developed in 1964 by Spielberger, Gorsuch, and Lushene (STAI Manual, 1983). This investigator has received permission to use the instrument (Appendix D). The STAI is made up of two separate self-reporting scales for measuring state anxiety (A-State) and trait anxiety (A-Trait). Each scale contains 20 questions on which subjects rate themselves on a four-point scale intensity. The A-State scale is balanced so that 10 items are scored directly and 10 are reversed. The A-Trait scale has seven items that are reversed and 13 that are scored directly. When administering the A-Trait scale, subjects are instructed to respond as they generally feel and with the A-State scale subjects are instructed to respond as they feel now.

STAI norms were based on a sample of 231 undergraduate students. For A-State, the mean was 35.13, S.D. 9.25, and coefficient alpha (internal consistency) was .89. On the A-Trait, the mean was 38.25, S.D. 9.94, and Coefficient alpha (internal consistency) was .89. After further testing and deletion, a final version of the A-Trait scale had a correlated coefficient .75 with the Institute for Personality and Ability Testing Anxiety Scale, and .52 with the Affect Adjective Checklist. The final version of the A-State was validated with 197 undergraduate students who responded to the instrument under four experimental conditions. The original STAI scales were called STAI Form X. The form has been revised and the new STAI form Y correlated .95 to .97 with Form X. In this study Form Y was used.

Objects Content Test (OCT). The OCT (Appendix B) was developed by Garretson and was based on Manford Kuhn's Twenty Statement Test (TST) (Spitzer, Couch, & Stratton, 1971). The TST is a test used to collect data on self identification. It asks the respondent to make 20 statements in response to the question "Who Am I?" The OCT instead of asking "Who Am I?" asks "What is the particular social object that the researcher is investigating?" The OCT differentiates and identifies people's attitudes toward social objects (Garretson, 1962). Waisanen and Kumate (cited in Spitzer, 1971, p. 134) in addition to asking about people's attitudes toward social objects also had people prioritize the objects. Waisanen and Kumate's form was used in this study.

The OCT test-retest reliability has a correlation coefficient range from .35 to .85 and the percentage agreements range from 43 percent to 95 percent. These coefficients are similar to those reported for other personality tests. The retest coefficients are relatively short-term and range from two weeks to three months (Spitzer et. al., 1971).

The content validity of the OCT is demonstrated by the open ended character of the TST. The open ended question insures that the responses are determined by the respondent and are not elicited by suggestion (Spitzer et. al., 1971).

Criterion validity was established by comparing the TST scores to scores on other self-concept instruments. The average correlation between TST scores and scores from similar self-concept instruments was .47 and the average correlation between TST scores and those from dissimilar instruments was .37, demonstrating that the supposed indicators of the same concept were somewhat more highly related. Validity of both the TST and the OCT has been established in many studies using

these tests (Garretson, 1962; Hocking et al., 1976; & Spitzer, 1971).

Demographic Data Sheet

The Demographic Data Sheet (Appendix C) was designed by this investigator. Questions on this sheet elicit the participants age, sex, and marital status. The participants were asked if they had been a patient in ICU or maternity, if they had had family in ICU or maternity, and if they had had work experience in ICU or maternity. These questions were asked since they could change the students familiarity with the clinical environment. This data was used to describe the sample and to see if both groups were similar.

Data Collection Procedure

The following procedure was used for data collection in this study.

Permission to do the study was obtained from the director of the school of nursing (Appendix E). After the thesis proposal was approved by the Human Subjects Committee, data collection was begun. On the first day of class the students in Medical-Surgical Nursing III and Maternity Nursing were approached in separate groups by a faculty member not teaching in either course who explained the study (Appendix F). Explanation included the study, requirements of students who participated, and information on the rights of students who participated. Those who agreed to participate were informed that completion of the tools would be considered as their consent to participate.

The students in both ICU and maternity who agreed to participate in the study were asked to complete the State-Trait Anxiety Inventory and the Demographic Data Sheet at that time. The State Anxiety Scale was administered first as recommended, then the Trait-Anxiety Scale, followed by the Demographic Sheet.

The students in both ICU and Maternity were retested by a faculty member not teaching in either course with the State-Anxiety Inventory at the end of their first clinical day. Both ICU and the maternity groups were retested again with the State-Anxiety Inventory at the end of two weeks (six clinical days). On the same day both groups were also administered the Objects Content Test.

Data Analysis Procedure

The following data analysis procedure was used for this study. The Demographic Data Sheet was used to describe the sample. The statistical evaluations that were carried out were as follows:

1. Correlation coefficients were done to determine if analysis of covariance could be used to analyze the data but, since they were not significant, t-tests were done on the independent groups (ICU and Maternity rotations) to compare state anxiety at three different times.
2. A correlation coefficient was used to analyze the relationship between trait anxiety scores and state anxiety scores at the end of the first day of clinical.
3. The students' responses about perceived sources of anxiety were categorized by the investigator and two other faculty members.
4. The number one, two, and three sources of anxiety for the two groups of students were identified and contingency tests were used to compare the two groups.

The level of significance in this study was 0.05 percent.

Statement of Risk

There was no anticipated risk to the participants in this study.

Agreement or refusal to participate did not affect the students' grades or evaluation. The Director of the School of Nursing of the participating institution gave written permission to administer the questionnaires to the students who had agreed to participate in the study. Anonymity was guarded by the investigator. Only the investigator had access to the raw data; code numbers were used instead of names, only group data was reported; and the name of the participating agency was not identified in the study.

Chapter IV

Analysis of the Data

The purpose of this study was threefold. One was to determine if there was a significant difference in state anxiety between nursing students assigned to an Intensive Care Unit (ICU) and those assigned to another clinical area. A second purpose was to determine if there was a relationship between nursing students' propensity to anxiety (trait anxiety) and their anxiety reaction (state anxiety) when assigned to an ICU rotation and to a maternity rotation. The third purpose was to explore nursing students' perceptions of sources of anxiety during the ICU rotation and the maternity rotation.

Demographic Analysis

The sample consisted of 38 senior nursing students who were just beginning their senior year of a three year diploma school. Nineteen of the students were randomly assigned to Medical-Surgical III with a clinical rotation to ICU and 19 were randomly assigned to a maternity rotation with rotations to labor and delivery, post-partum, and newborn nursery.

Demographic data were collected on all students. The data for the ICU group and maternity group are presented in Table 1. The majority of the two groups were between the ages of 20-29 years old and were female. Both groups were about equally divided between single and married students. To determine if students were familiar with the environment, students were asked if they had previous work experience, patient experience, or family experience in ICU or maternity. Only four students had previous work experience in either area and those who did had

worked only a short period of time (two days to three months). Two exceptions were that one student in ICU had worked part time for two years in respiratory therapy and was also on a code blue team. This student's anxiety scores were the lowest but there was also another student with low scores who did not have any experience in ICU. Another student in maternity had worked six months as a nursing assistant, but this student's score was near the mean score of the group. Only two students in the ICU group had previously been a patient in ICU, and their lengths of hospital stay were only one day and five days. Four students in the maternity group had been patients in maternity for two to five days and two of these students had been a patient at two different times. Previous experience as visitors of family in the ICU and maternity units was also very minimal and consisted of short visits with either a grandparent, great aunt, uncle, sister, or sister-in-law. One exception in the maternity group was that one student stayed with her sister during labor. The mean state anxiety score of the maternity group on the first clinical day was 34.32. The students that had patient and family experience in maternity had state anxiety scores that ranged from 26 to 33. The mean state score of the ICU group on the first clinical day was 44.26. The two students in ICU that had patient experience had state anxiety scores of 53 and 54.

Table 1
Demographic Data

		ICU (N=19)	Mat (N=19)	Total (N=38)
Age	20-29	15 (78.94%)	15 (78.94%)	30 (78.9 %)
	30-52	4 (21.05%)	4 (21.05%)	8 (21.05%)
Sex	Female	17 (89.47%)	16 (84.21%)	33 (86.84%)
	Male	2 (10.53%)	3 (15.79%)	5 (13.16%)
Marital Status	Married	10 (52.63%)	7 (52.63%)	17 (44.74%)
	Divorced	2 (10.53%)	11 (57.89%)	13 (47.37%)
	Single	7 (36.84%)	1 (5.26%)	8 (7.89%)
Experience With the Environment	Work	5 (26.32%)	1 (5.26%)	6 (15.79%)
	Patient	2 (10.53%)	4 (21.05%)	6 (15.79%)
	Family of Patients	8 (42.11%)	3 (15.79%)	11 (28.95%)

Data Analysis

The data were collected as described in the methodology. The students that were in the ICU rotation were assigned to a six day rotation except for three students who were assigned to a three day rotation. These three student's scores were also near the mean score of the group. All of the ICU students were tested on their last clinical day and the students in maternity were tested on their sixth clinical day.

The anxiety scales of each student were scored according to the instructions in the STAI Manual (Spielberger et. al., 1970). The possible scores on the STAI Y-1 (state) and Y-2 (trait) range from 20-80. A lower score indicates low anxiety and a higher score indicates high anxiety. The raw scores for all anxiety tests for the ICU and Maternity groups are presented in Appendix G.

The following statistical analyses were completed on the data to

examine the research question. Each question will be reviewed and the statistical analysis for each question will be presented.

Research Question 1. The first research question was "Will nursing students experience higher levels of state anxiety during a clinical rotation in ICU than during a clinical rotation in maternity nursing?"

Pearson Correlation Coefficients were used to determine if analyses of covariance could be used to analyze the data. Table 2 reflects the correlation matrix. Because the correlation coefficients were not of significant magnitude to explain an appreciable amount of variance in the dependent variables (scores), t-tests were utilized to determine group variances rather than analysis of covariance.

Table 2
Correlation Matrix

	Trait	Pre-state	State 1	State 6
Trait	-	.65	.45	.19
Pre-state		-	.46	-.21
State 1			-	.09
State 6				-

To determine if the two groups were similar the students were measured preclinically for trait anxiety and state anxiety. Table 3 reflects the data analysis of trait anxiety for both groups. The raw scores of STAI Form Y-2 (trait) ranged from 27-54 with a mean score of 37.79 for the ICU group and 24-59 with a mean of 36.47 for the maternity group. The ICU and maternity groups were not significantly different on trait

anxiety scores ($t=.46$).

Table 3
Trait Anxiety of ICU and Maternity Group

Subjects	<u>N</u>	<u>\bar{X}</u>	<u>S.D.</u>	<u>S.E.\bar{X}</u>	<u>t</u>
ICU	19	37.79	7.61	1.75	.46
Maternity	19	36.47	9.94	2.28	

CV $t_{.95, 36} = 1.689$

Table 4 reflects the data analysis of the preclinical state anxiety for the ICU group and the maternity group. The range of raw scores for the preclinical state anxiety were exactly the same for both groups and ranged from 20-55. The two groups' preclinical state anxiety scores were not significantly different ($t=1.80$).

Table 4
Preclinical State Anxiety of ICU and Maternity Group

Subjects	<u>N</u>	<u>\bar{X}</u>	<u>S.D.</u>	<u>S.E.\bar{X}</u>	<u>t</u>
ICU	19	38.84	10.23	2.35	1.80
Maternity	19	33.11	9.43	2.16	

CV $t_{.95, 36} = 1.689$

The data analysis for group differences in state anxiety on the first clinical day are presented in Table 5. The state anxiety scores of the students in the ICU rotation on the first clinical day ranged from 26-72 with a mean of 44.26. The state anxiety scores of students in maternity rotation on the first clinical day ranged from 20-56 with

a mean of 34.32. A t-test for independent samples (ICU) and maternity rotation revealed that nursing students in the ICU rotation experienced significantly higher levels of state anxiety on the first clinical day than nursing students in the maternity rotation on the first clinical day (t-2.91).

Table 5
State Anxiety on First Clinical Day
of ICU and Maternity

Subjects	<u>N</u>	<u>X̄</u>	<u>S.D.</u>	<u>S.E.X̄</u>	<u>t</u>
ICU Group	19	44.26	11.13	2.55	2.91
Maternity Group	19	34.32	9.94	2.28	

p= < .05

CV t .95, 36 = 1.689

The data analysis for group differences in state anxiety on the sixth clinical day are presented in table 6. The state anxiety scores of the students in the ICU rotation on the sixth clinical day ranged from 23-56 with a mean of 37.74. The state anxiety scores of the students in the maternity rotation on the sixth clinical day ranged from 30-74 with a mean of 40.32. A t-test for independent samples (ICU and maternity rotation) revealed no significant difference in anxiety levels between the two groups on the sixth clinical day (t= -0.67).

Table 6
State Anxiety on Sixth Clinical Day
of ICU and Maternity

Subjects	<u>N</u>	<u>\bar{X}</u>	<u>S.D.</u>	<u>S.E.\bar{X}</u>	<u>t</u>
ICU Group	19	37.74	8.77	2.01	-0.67
Maternity Group	19	40.32	14.17	3.25	

p= > .05

CV t .95, 36 = 1.689

Research Question 2. The second question was "Will nursing students who show high trait anxiety also show high state anxiety on the first day of clinical rotation to ICU and maternity?" A Pearson Product Moment Correlation revealed that students in both groups who scored high on trait anxiety also scored high on state anxiety the first clinical day (t=3.11) (r=.46).

Research Question 3. The Objects Content Test was used to answer the third question "What are the students' perceived sources of anxiety during the ICU and maternity rotations?" The responses of the maternity group and the ICU group on the Objects Content Test were analyzed by literal content analysis. The ICU groups' literal responses were initially reviewed by the investigator and the responses were organized in nine categories. The maternity groups' literal responses were also organized and fell into eight of the same nine categories as the responses of subjects in ICU. To check the reliability of the categories, two faculty members reviewed and categorized the responses. The categorization of the ICU group showed an interrater agreement of 94.5%. The

categories of the maternity group showed an interrater agreement of 98.8%. The following are examples of responses in each category: the first eight categories were the same for the ICU group and for the maternity group. The ninth category included only responses from the ICU group.

1. Equipment and Procedures

Some examples of sources of anxiety in this category that the students in ICU listed were suctioning, tracheostomy care, sterile dressing changes, reading heart monitors, and seeing patients with multiple tubes and machinery. The students in maternity listed only three sources of anxiety under this category and they were preparing a patient for delivery, learning new procedures and new equipment.

2. Medications

The students in ICU identified mixing drugs, giving I.V. piggyback medications, giving direct I.V. push medications, administering so many drugs, figuring I.V. calculations, and the fear of making a medication error as sources of anxiety in this category. The students in maternity included only one source of anxiety and that was figuring antibiotic dosages.

3. Documentation

The students in ICU included charting, transcribing orders, and care plans as sources of anxiety in this category. The students in maternity listed charting as a source of anxiety.

4. Patient Condition/Care

The student in ICU listed patients that were in so much pain, patients that were confused, patients that were terminal and the fear that their patient would code (need for resuscitation)

as sources of anxiety in this category. The students in maternity listed factors associated more with the care of the patient instead of condition of the patient. Some examples listed were taking care of the mother in labor and taking care of infants such as holding, feeding, bathing, and performing emergency care. Also listed was seeing and caring for a baby with a birth defect.

5. Understanding and giving report

The students in ICU identified giving report to another floor and understanding report as their sources of anxiety in this category. The students in maternity identified giving a taped report as a source of anxiety in this category.

6. Interaction with nursing staff

The students in ICU listed staff nurses' attitudes and expectations as sources of anxiety. Only one student in maternity listed an example under this category and it was meeting staffs' expectations.

7. New Environment

The students in ICU listed the sources of anxiety as unfamiliarity with location of equipment and supplies, the routine of the unit, the teacher, and the unit itself. The maternity students also listed unfamiliarity with location of equipment and supplies and routine of the unit as their sources of anxiety.

8. Other

The students in ICU included only one example that fit under this category and that was interaction with family. A student in maternity listed getting along with classmates as her source of

anxiety.

9. Interaction with Physicians

The students in ICU listed doctors asking them direct questions about the patient's care, making assessment in front of the doctor and knowing what to get for the doctor as sources of anxiety. The students in maternity did not have any sources of anxiety that were placed in this category.

The expected and observed frequencies of source of anxiety in each of the nine categories are presented in Table 7. The Chi square was significant at the 0.05 level and revealed a significant difference in frequency of sources of anxiety in four different categories. The students in the ICU group had an increased number of sources of anxiety in the Equipment/Procedures, Medications and Documentation categories. The students in the maternity group had an increased number of sources of anxiety in the Patient/Condition category.

Research Question 4. The fourth question was "What are the three most stressful sources of anxiety for the students during the ICU and maternity rotations?" To answer this question the students were asked to identify their top three sources of anxiety. Individual listing of the number one source of anxiety of the ICU group and maternity group are presented in Table 8. With regard to the number one source of anxiety of the ICU group, seven of the nine categories were listed by at least one student as the number one source of anxiety. Equipment/Procedures ranked as the number one stressor for the ICU group. The maternity group listed five of the eight categories as a number one source of anxiety. Fifty percent of the maternity group listed Patient Condition/Care as their number one source of anxiety and most of these responses

referred to infant care and the care of a baby with a birth defect.

Table 7

Observed and Expected Frequencies of Categories of
Perceived Sources of Anxiety for Students in ICU and Maternity

	ICU		Maternity		Totals
	Observed	Expected	Observed	Expected	
Equipment and Procedures	38	28.84	3	12.16	41
Medications	21	15.48	1	6.52	22
Documentation	17	14.77	4	6.23	21
Patient Condition and Care	13	31.66	22	13.34	45
Report	4	5.63	4	2.37	8
Nursing Staff	4	3.52	1	1.48	5
Nursing Environment	12	18.99	15	8.01	27
Physicians	9	6.33	0	2.67	9
Other	3	2.81	1	1.19	4
Totals*	121		51		172

Df=8

$\chi^2=38.53$ p= 0.05

C.V. =2.73

* The total number of perceived sources of anxiety was two times greater for ICU students.

Table 8
Number One Source of Anxiety
for the ICU and Maternity Groups

Categories	Group		
	ICU *N=19	Maternity *N=16	Total N=35
1. Equipment/ Procedure	6 (31.58)	0	6 (17.14)
2. Medications	2 (10.53)	1 (6.25)	3 (8.57)
3. Documentation	2 (10.53)	1 (6.25)	3 (8.57)
4. Patient Con- dition/Care	3 (15.79)	8 (50.0)	11 (31.43)
5. Report	1 (5.26)	2 (12.5)	3 (8.57)
6. Nursing Staff	0	0	0
7. New Environ- ment	4 (21.05)	4 (21.0)	8 (22.81)
8. Physician	1 (5.26)	0	1 (2.86)
9. Other	0	0	0

* All 19 students in ICU identified their number one source of anxiety only 16 students in Maternity identified their number one source of anxiety.

Individual listing of the number two stressors of the ICU group and maternity group are presented in Table 9. Equipment/Procedures was listed by over 50% of the ICU group as the number two source of anxiety. The maternity group identified two categories almost equally as the number two source of anxiety. These were Patient Condition/Care and New Environment.

Table 9
 Number Two Source of Anxiety
 for the ICU and Maternity Groups

Categories	Group		
	ICU * N=18	Maternity * N=14	Total N=32
1. Equipment/ Procedure	10 (55.56)	2 (14.29)	12 (37.5)
2. Medications	3 (16.67)	0	3 (9.38
3. Documentation	0	1 (7.14)	1 (3.13)
4. Patient Con- dition/Care	2 (11.11)	4 (28.57)	6 (18.75)
5. Report	0	2 (14.79)	2 (6.25)
6. Nursing Staff	1 (5.56)	1 (7.14)	2 (6.25)
7. New Environ- ment	2 (11.11)	3 (21.43)	5 (15.63)
8. Physician	0	0	0
9. Other	0	1 (7.14)	1 (3.13)

* In the ICU group 18 out of 19 identified their number two source of anxiety and in the Maternity group 14 out of 19 identified their number two source of anxiety.

Individual listing of the number three sources of anxiety for the ICU and maternity group are presented in Table 10. Three categories were identified by an almost equal number of students in the ICU group as the number three source of anxiety, these were Documentation, Medications, and Equipment/Procedures. Over 60% of the maternity group listed Patient Condition/Care as their number three source of anxiety.

Table 10
 Number Three Sources of Anxiety
 for the ICU and Maternity Groups

Categories	Group		
	ICU * N=18	Maternity * N=13	Total N=31
1. Equipment/ Procedure	4 (22.22)	1 (7.69)	5 (16.13)
2. Medications	5 (27.78)	0	5 (16.13)
3. Documentation	5 (27.78)	1 (7.69)	6 (19.13)
4. Patient Con- dition/Care	1 (5.56)	8 (61.54)	9 (29.03)
5. Report	0	0	0
6. Nursing Staff	1 (5.56)	0	1 (3.23)
7. New Environ- ment	1 (5.56)	2 (15.38)	3 (9.68)
8. Physician	1 (5.56)	0	1 (3.23)
9. Other	0	1 (7.69)	1 (3.23)

* In the ICU group 18 out of 19 identified their number three source of anxiety and in the Maternity group 13 out of 19 identified their number three source of anxiety.

In summary, the differences that could be seen between the students in the ICU rotation and the students in the maternity rotation were that the ICU group identified Equipment/Procedure related activities as the most stressful while the maternity group identified Patient Condition/Care functions that related mostly to newborn care as the most stressful. In addition the students in the ICU rotation identified 121 sources of

anxiety and the students in the maternity rotation identified 51 sources of anxiety.

Discussion of the Data Analysis

The demographic data showed that there were no major differences between the two groups. Both the ICU and maternity groups were similar in range of ages and both groups had about the same number of males and females. The two groups were also similar in the number of married, single, and divorced students. Previous experience in these two clinical areas was minimal for both groups. Four research questions formed the basis of the investigation of anxiety in nursing students during the ICU and maternity rotations. The following is a discussion of the results of the data analyses.

Research Question 1. The first research question was designed to determine if students experienced higher levels of anxiety during a clinical rotation in ICU than during a clinical rotation in maternity nursing. The two groups were not significantly different on preclinical trait anxiety or on preclinical state anxiety.

A t-test revealed that nursing students on the first clinical day of the ICU rotation experienced significantly higher levels of state anxiety than nursing students in the maternity rotation on the first clinical day. These results are similar to studies by other researchers which compare anxiety of general nursing staff to nursing staff in ICU. Hay and Oken (1972) and Vreeland and Ellis (1969) have shown that staff nurses in ICU experience higher levels of anxiety than nurses in other clinical areas. With regard to research studies of nursing students (Davitz, 1972; Fox et. al., 1963; Garrett et. al., 1976), researchers have identified the clinical area of the program as the most stressful of the students'

experiences.

Research Question 2. The second question examined the relationship of trait anxiety to state anxiety. It was found that students in both groups who scored high on trait anxiety also scored high on state anxiety. While the correlation coefficient is significant, for use in education to predict those persons who experience high state anxiety, the coefficient of determination is 0.16. This means that only 16% of the variance on one variable is explained by the other variable. Therefore in this study trait anxiety was not a good predictor for determining which students would experience high state anxiety.

Research Question 3. The third research question was designed to determine what students' perceived sources of anxiety were during the ICU and maternity rotations. The students in ICU listed a greater number of specific sources of anxiety than students in the maternity rotation. This alone could indicate that students in ICU experience more anxiety than students in maternity. The students in ICU most frequently listed responses that were categorized under technical knowledge such as Equipment/Procedures, Medications and Documentation as sources of anxiety. Research studies of nurses (Hay & Oken, 1972; Koumans, 1965; Strauss, 1968) also listed complicated machinery as a source of anxiety, but other sources of anxiety for staff nurses in ICU were greater responsibility, the crisis atmosphere, the conflict with administration, relationships with family, and the rapid turnover of staff. This study reveals that students in ICU have some different sources of anxiety than staff nurses in ICU. Because students have different responsibilities and are in ICU for a limited time those differences are explainable. The students in maternity most frequently identified responses that were

categorized under Patient Condition/Care, the next largest category of sources of anxiety was New Environment. The category of Patient Care/Condition for the maternity group contained responses that dealt with care of the new mother, the newborn, and a baby with a birth defect, although care of newborn was most frequently mentioned. Students during a maternity rotation do not usually have as many procedures and medications to deal with so they may focus more concern on basic care of the patient.

Research Question 4. The fourth research question was used to determine the three most stressful sources of anxiety for the student during ICU and maternity rotations. For the ICU group, Equipment/Procedures ranked as the number one and number two sources of anxiety. The number three source of anxiety was divided almost equally between the three categories of Documentation, Medications, and Equipment/Procedures. The maternity group ranked Patient Condition/Care as the number one source of anxiety. The number two source of anxiety was equally divided between Patient Condition/Care and New Environment. The number three source of anxiety was also Patient Condition/Care. In contrast to this study, Parkes (1980) study showed increased levels of anxiety in students on medical floors in comparison to students on surgical floors. The explanation given for this was that surgical floors emphasized the "instrumental" role of the nurse with emphasis on active intervention and use of technical skills. In contrast on the medical floor the patient was more likely to stay longer and have less improvement and impose more difficult emotional demands on the student. In this study the "instrumental" role of the nurse was emphasized in ICU but students had a higher level of anxiety. This author believes one explanation for this may be that

interventions and technical skills are different in an ICU unit than on a surgical floor. Another explanation is that in this study students in ICU were compared to students in maternity and students in maternity probably do not experience the emotional demands from patients that students experience on a medical floor. None of this later research had specifically examined the anxiety of the nursing students in ICU as compared to other clinical areas. The maternity group in this study supported Garrett et al. (1976) study in that students identified patient care as being a source of anxiety. In this study interpersonal relationships with instructors was not identified by students in ICU or maternity as being a source of anxiety as it was in the study by Garrett et al. (1976).

Incidental findings

It was assumed that state anxiety would decrease after the initial experience in ICU and maternity and might return to preclinical levels. A comparison of state anxiety on the sixth clinical day with preclinical state anxiety was not significantly different than their preclinical levels. However in the maternity group, the students level of anxiety increased more on the sixth day than it was preclinical. One explanation for this is that three students had markedly increased levels of state anxiety on the sixth clinical day. The t -test for the maternity group was repeated leaving out the scores of these three students. The mean for the preclinical state anxiety in the maternity group without the scores of these three students was 33.81 and standard deviation was 9.87. The mean on the sixth clinical day without the scores of these three students was 34.94 and standard deviation was 6.12 ($t = 0.44$).

Without the scores of these three students, the state anxiety of the maternity group on the sixth clinical day was not significantly different from the preclinical state anxiety scores. No specific reason could be found for the three students increased level of state anxiety on the sixth clinical day. Their preclinical state anxiety was not increased above the means. Thus in general anxiety does decrease after several days of exposure to an environment, but faculty must always be aware that new or different experiences can occur during a rotation that cause increased anxiety for individual students.

Chapter V

Summary, Conclusions, Limitations and Recommendations

Nurses in general have a great potential for having increased anxiety because they care for patients who are facing stressful situations (Gentry, Foster, & Froehling, 1972; Scully, 1980). For nurses working in Intensive Care Units, the problem of anxiety is supposedly even more pronounced (Hay & Oken, 1972; Vreeland & Ellis, 1969). Nursing students rotating through ICU have the same potential for increased anxiety. Some studies (Booker & Rouhiainen, 1981; Davitz, 1972; Garrett, 1976) have reported on anxiety and stress in the nursing students, but none of this research has specifically examined the anxiety of the nursing student in ICU. This chapter contains the summary, conclusions and recommendations for further research.

The purposes of this comparative correlative study were to determine if there was a significant difference in the change in state anxiety between students nurses assigned to an Intensive Care Unit (ICU) and those assigned to another clinical area. A second purpose was to determine if there was a relationship between student nurses' propensity to anxiety (trait anxiety) and their anxiety reaction (state anxiety) when assigned to an ICU rotation and to a maternity rotation. The third purpose was to explore student nurses perception of sources of anxiety during the ICU rotation and the maternity rotation.

Data were collected from 38 senior nursing students in a diploma school of nursing. Nineteen students were randomly assigned to an ICU rotation and 19 were randomly assigned to a maternity rotation. Data from all 38 students were included in the study. The tools for the study

were Spielberger's State-Trait Anxiety Inventory (Appendix A), the Objects Content Test (Appendix B), and a Demographic Data Sheet (Appendix C). Data were collected over a 10 week period from August 29 to November 4, 1983.

On the first day of class (Preclinical) the students who consented to participate in this study completed the Demographic Data Sheet and Spielberger's State-Trait Anxiety Inventories. The analysis of the Demographic Data revealed that the two groups were similar in age, sex, and marital status. It also revealed that both groups had had minimal experience in ICU and maternity. The analysis of the preclinical State-Trait Anxiety scores revealed that the two groups were not significantly different preclinically.

After the first day of clinical, the students in the ICU rotation and maternity rotation were retested with the State Anxiety Inventory. The data analysis revealed that the nursing students in the ICU rotation experienced significantly higher levels of state anxiety than nursing students in the maternity rotation. On the sixth day of clinical the nursing students in ICU rotation and maternity rotation were retested with the State Anxiety Inventory. The data analyses revealed no significant difference in anxiety levels between the two groups on the sixth clinical day.

On the sixth clinical day, the nursing students in the ICU rotation and maternity rotation were administered the Objects Content Test and were asked to list sources of anxiety and then to prioritize the top three sources of anxiety. The individual sources of anxiety were categorized into eight major categories for both groups by two faculty members. Interrater agreement was 94.5% for the ICU group and 98.8% for

the maternity group. The students in the ICU group listed twice as many sources of anxiety as the students in the maternity group. For the students in the ICU group, Equipment/Procedures was the most frequently listed category of source of anxiety and was also the number one category of source of anxiety. For the maternity group Patient Condition/Care was the most frequently listed category of sources of anxiety and the source of anxiety most frequently identified in this category related to care of the newborn. This was also their number one source of anxiety.

Conclusions

Several conclusions may be drawn from the data obtained in this study. They are as follows:

1. Nursing students in the ICU rotation experienced higher levels of state anxiety at the beginning of the rotation than nursing students in the maternity rotation, but then anxiety levels returned to normal.
2. Nursing students that had high trait anxiety also had high state anxiety on the first clinical day during the ICU and maternity rotations, but in this study use of trait anxiety for identifying highly anxious students is not recommended for use in education since only 16% the variance in state anxiety is due to trait anxiety.
3. Nursing students in ICU had different major sources of anxiety than nursing students in maternity.
4. Nursing students in ICU identified many more individual sources of anxiety than nursing students in maternity.
5. Nursing students in ICU had different sources of anxiety than

staff nurses in ICU.

Limitations

Limitations of this study were the small number of subjects and the use of only one school.

Implications for Nursing

The results of this study indicated that nursing students experience more anxiety in a clinical rotation to ICU than to a clinical rotation to maternity. The students in ICU listed a greater number of individual sources of anxiety. Understanding that difference in anxiety levels results from different clinical experiences is important since the anxiety level of the student influences learning. Recognizing, intervening, and assisting the student to gain control over anxiety is an important and challenging component of clinical instruction. The identification of high anxiety producing clinical rotations can be used to plan specific orientation programs to decrease anxiety. An orientation program or a program early in the curriculum that deals with feelings of anxiety, fear, and methods of coping, such as training in relaxation and imagery would help the students to be aware of their anxiety and how to cope with it. A counseling service could also be used to help some students.

This study also identified students' sources of anxiety in ICU and maternity. Identification of anxiety sources should help in planning orientation programs and clinical laboratories for students. Preclinical laboratories for ICU could be designed to give the students more experience with different types of procedures such as suctioning endotracheal and tracheostomy tubes, administering tube feedings, and applying sterile bandages. Other experiences could include practice with drug calculations mixing drugs, and hanging I.V. solutions with the I-Med machine. For the

maternity students simulations related to patient care/condition would afford the student some idea of what to expect and how to handle it.

Recommendations for further research

Recommendations for further research based on the results of this study are:

1. Replication of the study using other clinical areas to compare these areas with ICU.
2. Replication of the study using students in programs in different geographical areas.
3. Replication of the study using nursing students from different types of programs such as associate and baccalaureate nursing programs.
4. Development and evaluation of an orientation program designed to reduce some of the sources of anxiety found in this study.
5. Development and evaluation of a counseling program specifically designed for nursing students to decrease level of anxiety.
6. To do a study on characteristics of interpersonal relationships of faculty-student since this aspect deviated from other studies.

References

- Basowitz, H., Persky, H., Korchin, S. & Grinker, R. Anxiety and Stress. New York; McGraw-Hill, 1955.
- Bilodeau, C. The Nurse and Her Reactions to Critical Care Nursing. Heart and Lung, 1973, 2, 358-363.
- Blainey, S. Anxiety in the Undergraduate Medical-Surgical Clinical Student. Journal of Nursing Education, 1982, 19, 33-36.
- Booker, B. & Rhouhiainen, U. Student Stress. The Australian Nurses' Journal, 1981, 10, 41-43.
- Carter, F. Psychosocial Nursing. New York: MacMillian, 1981.
- Carter, L. & Mills, G. Cognitive Learning and Anxiety in Registered Nurses in CEU-Contingent and Non-contingent Continuing Education Courses. Journal of Continuing Education in Nursing, 1982, 13, 19-26.
- Cassem, N. & Hackett, T. Stress on the Nurse and Therapist in the Intensive Care Unit and the Coronary Care Unit. Heart and Lung, 1975, 4, 252-259.
- Davitz, J. Identification of Stressful situations in a Nigerian School of Nursing. Nursing Research, 1972, 21, 352-357.
- Fox, D., Diamond, L., Hodgins, J., Knapf, L., Walsh, R. Correlates of Satisfaction and Stress with Nursing School Experience. Nursing Research, 1963, 12, 83-88.
- Freud, A. The Ego and Mechanisms of Defense. New York, International Universities Press, 1946. (Originally published in 1936.)
- Friedman, E. Symposium: Psychosocial Factors in Intensive Care Nursing. Heart and Lung, 1973, 2, 355-357.
- Garrett, A., Manuel, D., & Vincent, C. Stressful Experiences Identified by Student Nurses. Journal of Nursing Education, 1976, 15, 9-21.
- Garretson, W. The Consensual Definition of Social Objects. Sociological Quarterly, 1962, 4, 337-342.
- Gaudry, E. & Spielberger, C. Anxiety and Educational Achievement. New York, John Wiley and Sons, 1971.
- Gentry, D., Foster, S. & Froehling, S. Psychologic Response to Situational Stress in Intensive and Nonintensive Nursing. Heart and Lung, 1972, 1, 753-754.
- Hay, D. & Oken, D. The Psychological Stress of Intensive Care Unit Nursing. Psychosomatic Medicine, 1972, 34, 30-33.

- Hocking, I., Hassaein, R. & Bahr, R. Willingness of Psychiatric Nurses to assume the Extended Role. Nursing Research, 1976, 25, 44-48.
- Holderby, R. Feelings Feelings How to Make a Rational Response to Emotional Behavior. Nursing 79, 39-43.
- Holsclaw, P. High Emotional Rise Areas. Nursing Forum, 1965, 4, 37-45.
- Huckaby, L. & Gagla, B. Nurses' Stress Factors in the Intensive Care Unit. Journal of Nursing Administration, 1979, 9, 21-27.
- Johnson, M. Anxiety/Stress and the Effects on Disclosure Between Nurses and Patients. Advances in Nursing Science, 1979, 1, 1-19.
- Jones, D. The Need for a Comprehensive Counseling Service for Nursing Students. Journal of Advanced Nursing, 1978, 3, 359-362.
- Kimmel, M. The Age of Anxiety: General Societal Impact and Particular Effects on Criminality. JPN and Mental Health Services, 1977, 27-30.
- Koumans, A. Psychiatric Consultation in an Intensive Care Unit. Journal of American Medicine Association, 1965, 194, 635-637.
- May, R. The Meaning of Anxiety, New York: Ronald Press Co., 1950.
- McKay, S. A Review of Student Stress in Nursing Education Programs. Nursing Forum, 1978, 17, 376-393.
- Mouly, G. Psychology for Effective Teaching. Holt, Rhinehart, & Winston, Inc. Chicago, 1973.
- Mowrer, O. Learning Theory and Personality Dynamics. New York: Ronald Press, 1950.
- Parkes, K. Occupational Stress Among Student Nurses - A Comparison of Medical and Surgical Wards. Nursing Times, 1980, 30, 113-116.
- Peplau, H. A Working Definition of Anxiety, Some Clinical Approaches to Psychiatric Nursing, New York: MacMillian, 1963.
- Quinlan, D. & Blatt, S. Field Articulation and Performance Under Stress. Journal of Consulting and Clinical Psychology, 1972, 39, 517.
- Sarason, I.G. Test Anxiety, General Anxiety, and Intellectual Performance. Journal of Consulting Psychology, 1957, 6, 486.
- Scully, R. Stress In The Nurse. American Journal of Nursing, 1980, 80, 912-918.
- Sobel, E. Self-Actualization and the Baccalaureate Nursing Student's Response to Stress. Nursing Research, 1978, 27, 238-244.

- Spielberger, C. & Gorsuch, R. Anxiety and Behavior, New York: Academic Press, 1966.
- Spielberger, C., Gorsuch, R. & Lushene, R. The State-Trait Anxiety Test Manual for Form X. Palo-Alto: Consulting Psychologist Press, 1970.
- Spielberger, C. The State-Trait Anxiety Test Manual for Form Y. Palo-Alto: Consulting Psychologist Press, 1983.
- Spielberger, C. Anxiety-Current Trends in Theory and Research. New York: Academic Press, 1972.
- Spitzer, S., Couch, C., & Stratton, J. The Assessment of the Self. Iowa City, Iowa: Escort, Sernoll, Inc., 1971.
- Strauss, A. The Intensive Care Unit It's Characteristics and Social Relationships. Nursing Clinics North America, 1968, 3, 7-15.
- Sullivan, H. The Interpersonal Theory of Psychiatry. New York: W.W. Norton & Co., 1953.
- Tillich, P. The Courage to Be, New Haven, Conn: Yale University Press, 1952.
- Turner, A. & King, C. Measuring and Reducing Noise. Hospitals, 1975, 49, 85-90.
- Vreeland, R. & Ellis, G. Stresses on the Nurse in an Intensive Care Unit. Journal of the American Medical Association, 1969, 208, 29-34.

APPENDIX A

SELF-EVALUATION QUESTIONNAIRE

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

STAI FORM Y-1

NAME (Code Number) _____ SEX: M F AGE _____ DATE _____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken the appropriate space on your answer sheet to indicate how you *feel* right now, that is, *at this moment*. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

NOT AT ALL
SOMEWHAT
MODERATELY SO
VERY MUCH SO

- | | | | | |
|--|---|---|---|---|
| 1. I feel calm | 1 | 2 | 3 | 4 |
| 2. I feel secure | 1 | 2 | 3 | 4 |
| 3. I am tense | 1 | 2 | 3 | 4 |
| 4. I feel strained | 1 | 2 | 3 | 4 |
| 5. I feel at ease | 1 | 2 | 3 | 4 |
| 6. I feel upset | 1 | 2 | 3 | 4 |
| 7. I am presently worrying over possible misfortunes | 1 | 2 | 3 | 4 |
| 8. I feel satisfied | 1 | 2 | 3 | 4 |
| 9. I feel frightened | 1 | 2 | 3 | 4 |
| 10. I feel comfortable | 1 | 2 | 3 | 4 |
| 11. I feel self-confident | 1 | 2 | 3 | 4 |
| 12. I feel nervous | 1 | 2 | 3 | 4 |
| 13. I am jittery | 1 | 2 | 3 | 4 |
| 14. I feel indecisive | 1 | 2 | 3 | 4 |
| 15. I am relaxed | 1 | 2 | 3 | 4 |
| 16. I feel content | 1 | 2 | 3 | 4 |
| 17. I am worried | 1 | 2 | 3 | 4 |
| 18. I feel confused | 1 | 2 | 3 | 4 |
| 19. I feel steady | 1 | 2 | 3 | 4 |
| 20. I feel pleasant | 1 | 2 | 3 | 4 |

SELF-EVALUATION QUESTIONNAIRE

STAI FORM Y-2

Code Number---

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken the appropriate space on the answer sheet to indicate how you *generally* feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you *generally* feel.

ALMOST NEVER
SOMETIMES
OFTEN
ALMOST ALWAYS

- | | | | | |
|---|---|---|---|---|
| 21. I feel pleasant | 1 | 2 | 3 | 4 |
| 22. I feel nervous and restless | 1 | 2 | 3 | 4 |
| 23. I feel satisfied with myself | 1 | 2 | 3 | 4 |
| 24. I wish I could be as happy as others seem to be | 1 | 2 | 3 | 4 |
| 25. I feel like a failure | 1 | 2 | 3 | 4 |
| 26. I feel rested | 1 | 2 | 3 | 4 |
| 27. I am "calm, cool, and collected" | 1 | 2 | 3 | 4 |
| 28. I feel that difficulties are piling up so that I cannot overcome them | 1 | 2 | 3 | 4 |
| 29. I worry too much over something that really doesn't matter | 1 | 2 | 3 | 4 |
| 30. I am happy | 1 | 2 | 3 | 4 |
| 31. I have disturbing thoughts | 1 | 2 | 3 | 4 |
| 32. I lack self-confidence | 1 | 2 | 3 | 4 |
| 33. I feel secure | 1 | 2 | 3 | 4 |
| 34. I make decisions easily | 1 | 2 | 3 | 4 |
| 35. I feel inadequate | 1 | 2 | 3 | 4 |
| 36. I am content | 1 | 2 | 3 | 4 |
| 37. Some unimportant thought runs through my mind and bothers me | 1 | 2 | 3 | 4 |
| 38. I take disappointments so keenly that I can't put them out of my mind | 1 | 2 | 3 | 1 |
| 39. I am a steady person | 1 | 2 | 3 | 4 |
| 40. I get in a state of tension or turmoil as I think over my recent concerns and interests | 1 | 2 | 3 | 4 |

APPENDIX B

Code Number _____

Objects Content Test

Ask this question of yourself: What was the most stressful for me, while I was doing my clinical rotation in ICU/Maternity? Answer as if you were giving the answers to yourself, not to anyone else. Take a little time to think about it.

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.
- 17.
- 18.
- 19.
- 20.

Now, go back and mark the three most stressful things or situations with number one for the most stressful, number two for the second most stressful, and number three for third most stressful.

APPENDIX C

Demographic Data Sheet

Code number _____

Instructions: Circle the appropriate printed answer and fill in the blank with the appropriate answer to the questions asked:

Age _____

Sex - Female, Male

Marital Status - Married, single, divorced, widowed

Have you ever worked in ICU (Maternity)?

If yes, how long did you work? _____

What responsibilities did you have? _____

What type of ICU (maternity) did you work in? _____

Have you ever been a patient in ICU (maternity)? Yes, No

If yes, how long? _____

Have you ever had family as a patient in ICU (maternity)? Yes, No

If yes, what was the relationship? _____

How much contact did you have with the patient? _____

APPENDIX D



UNIVERSITY OF SOUTH FLORIDA
TAMPA ST PETERSBURG FORT MYERS SARASOTA

COLLEGE OF SOCIAL & BEHAVIORAL SCIENCES
HUMAN RESOURCES INSTITUTE
TAMPA, FLORIDA 33620

813: 974-2342

June 30, 1983

Ms. J. Ruth Gilpin, R.N., B.S.N.
Route 2
Stewartsville, Missouri 64490

Dear Ms. Gilpin:

Thank you for your letter of June 24. I was pleased to learn of your proposed study of the anxiety experienced by nurses assigned to different wards and rotations.

I am enclosing a copy of the Test Form for the STAI (Form Y) and would certainly like to encourage you to use it in your thesis research. However, I can no longer give permission to reproduce the scale since the copyright is held by the publisher.

The STAI Test Forms can be obtained from Consulting Psychologists Press and an Order Form is enclosed for your convenience. A special discount on test materials is available to graduate students doing unsupported dissertation research. If you decide to use the STAI in your thesis study, be sure to indicate this on your Order Form and have it endorsed by your advisor.

If you wish to reproduce the STAI in a different format from the published version, address your request to Ms. Peggy Ferris, Consulting Psychologists Press, 577 College Avenue, Palo Alto, CA 94306, and explain what you wish to do, the number of copies required, etc.

Thank you for your interest in the STAI and best wishes in your thesis research. If I can be of further assistance, please feel free to write or call me.

Sincerely,

CHARLES D. SPIELBERGER, PH.D.
Professor of Psychology and
Director, Center for Research
in Community Psychology

CDS/vb

Encl.

cc: Ms. Peggy Ferris

APPENDIX E

To whom it may concern:

J. Ruth Gilpin has permission to approach senior nursing students to request their participation in her research project. It is understood that student participation will involve completing six questionnaires. The questionnaires will be completed at different times over a two week period.

It is understood that the purpose of these questionnaires is for data collection for J. Ruth Gilpin's Master thesis on "Anxiety of the Nursing Student during ICU and Maternity Rotations". It is understood that confidentiality will be maintained. The school will not be identified and only group data will be reported. It is understood that the student will be informed that their participation is voluntary and that their participation or nonparticipation will not influence their grades.

Name

Position

Institution

Date

APPENDIX F

Explanation of Study to the Students

- I. Purpose of Study
 - A. Ruth Gilpin is doing research for her Master thesis
 - B. The study is to determine student's feelings related to the clinical rotation of ICU and maternity in the senior year
 - C. The research will help faculty plan for orientation and for the experience in ICU and maternity
- II. Participation
 - A. Participation in the study is voluntary
 - B. Participation or nonparticipation will not influence your grades
 - C. Investigator or faculty teaching courses will not have access to names of students who participated or do not participate
- III. Confidentiality
 - A. Names will not be used
 - B. The school will not be identified
 - C. Only group data will be reported
- IV. Administration of Questionnaires
 - A. On the first day of class you will be asked to fill out three questionnaires which will take 12-15 minutes
 - B. At the end of the first clinical day you will be asked to fill out one questionnaire which will take 2-5 minutes
 - C. At the end of the sixth clinical day you will be asked to fill out two questionnaires which will take 5-10 minutes
- V. Consent to Participate
 - A. Completion and return of questionnaires indicates voluntary consent to participate in the study

APPENDIX G

Trait and State Anxiety Scores
and Experience of ICU Students

	Pre- clinical Trait	Pre- clinical State	First Clinical State	Sixth Clinical State	Work Exper- ience	Patient Exper- ience	Family Exper- ience
1.	40	43	41	40	-	-	Grand- mother 1-2X
2.	39	39	53	41	-	1 Day	-
3.	33	33	43	35	-	-	-
4.	47	44	56	41	-	-	-
5.	43	49	41	42	-	-	-
6.	35	46	47	35	-	-	Uncle 2X
7.	36	36	72	31	-	-	-
8.	54	52	47	30	3mo NA	-	-
9.	39	25	27	56	-	-	-
10.	29	26	39	40	-	-	-
11.	23	25	26	23	-	-	-
12.	41	34	46	51	PT 2Yrs	-	-
13.	27	20	43	51	-	-	-
14.	38	43	48	30	2 Wks	-	Sister
15.	34	55	33	25	-	-	-
16.	36	40	36	36	2 Wks	-	Great Aunt 2X
17.	43	43	35	30	-	-	Sister
18.	32	32	54	37	-	5 Dys	-
19.	49	53	44	43	2 Dys	-	-

APPENDIX H

Trait and State Anxiety Scores
and Experience of Maternity Students

	Pre-clinical Trait	Pre-clinical State	First Clinical State	Sixth Clinical State	Work Exper- ience	Patient Exper- ience	Family Exper- ience
1.	29	20	26	31	-	-	Sister in Labor
2.	37	31	46	60	-	-	-
3.	26	27	33	31	-	-	-
4.	27	25	20	37	-	-	-
5.	34	36	29	33	-	5 Dys/ 2X	Visit Sis. in Labor
6.	24	23	22	28	-	-	-
7.	41	43	46	39	-	-	-
8.	27	30	29	38	-	-	-
9.	30	23	29	41	-	3 Dys	-
10.	51	35	39	73	-	-	-
11.	43	44	50	50	-	-	-
12.	35	33	21	40	-	2 Dys/ 3 Dys	-
13.	37	32	39	33	-	-	Sister-in- Law
14.	56	36	28	32	-	-	-
15.	32	35	38	27	6mo NA	-	-
16.	38	55	35	30	-	-	-
17.	30	22	33	74	-	3 Dys 2X	-
18.	59	49	56	40	-	-	-
19.	37	30	33	30	-	-	-