

OCCUPATIONAL STRESS AND THE
NEWLY GRADUATED NURSE

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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	iii
TABLE OF CONTENTS	iv
LIST OF TABLES	vi
 Chapter	
1. INTRODUCTION	1
Problem of Study	3
Justification of Problem	3
Theoretical Framework	7
Assumptions	11
Hypotheses	11
Definition of Terms	12
Limitations	13
Summary	14
 2. REVIEW OF LITERATURE	 15
Occupational Stress	16
Stress in Nursing	22
Newly Graduated Nurses	27
Summary	33
 3. PROCEDURE FOR COLLECTION AND TREATMENT OF DATA	 34
Setting	34
Population and Sample	35
Protection of Human Subjects	35
Instrumentation	37
Data Collection	43
Treatment of Data	45

	Page
4. ANALYSIS OF DATA	48
Description of the Sample	48
Findings	58
Hypothesis 1	58
Hypothesis 2	60
Summary of Findings	63
5. SUMMARY OF THE STUDY	66
Summary	66
Discussion of Findings	69
Hypothesis 1	69
Hypothesis 2	70
Conclusions and Implications	72
Recommendations for Further Study	75
APPENDIX A	76
APPENDIX B	79
APPENDIX C	81
APPENDIX D	85
APPENDIX E	89
APPENDIX F	92
APPENDIX G	94
REFERENCES	98

LIST OF TABLES

Table	Page
1. Age Distribution of the Sample	50
2. Prior Work Experience in Current Hospital	52
3. Frequency of Job Characteristics	54
4. Arbitrary Division of Scores on Trait Anxiety Inventory	57
5. Simple Linear Regression: Trait Anxiety and Level of Stress Response	59
6. Multiple Regression: Level of Stress, Trait Anxiety, and Job Character- istics	61

CHAPTER 1

INTRODUCTION

Stress is a word commonly used in today's society, yet the concept of stress is complex, multifaceted and often poorly understood. "Everybody has it, everybody talks about it, yet few people have taken the trouble to find out what stress really is" (Selye, 1974, p. 11). Stress has been identified with the field of engineering, where the term means some external force directed at a physical object. Lazarus (1966) viewed stress as a universal human and animal phenomenon which results in intense and distressing experiences and is a tremendous influence on behavior.

The first job experience is a proving ground for the newly graduated nurse. It provides the opportunity and the challenge of proving oneself to one's self, one's co-workers, and one's supervisors (Schmalenberg & Kramer, 1979). There can be little doubt that the first job is a stressful experience for many new nurses. As Kramer and Schmalenberg (1978) have identified, there are many stressors inherent in the first job situation. The transformation of values from student to worker, the

perceived lack of necessary knowledge and skills, and the process of socialization into a new group are three areas of stress that should concern the newly graduated nurse and the employing facility.

Social critics blame stressful work situations on the frantic pace of contemporary American life style. Research in various fields has related stress to both physiological and psychological problems. In addition to creating such problems as anxiety, depression, headaches, hypertension, and coronary heart disease, stress has been related to decreases in efficiency, morale, and work performance. All of these potential factors ultimately affect patient care (Ivancevich & Matteson, 1980).

Theoretical and empirical problems may be encountered in studying different factors of stress. The stimulus conditions of stress reactions, as well as the intervening structures and processes that determine when and in what form the stress reaction will occur should be studied (Lazarus, 1966). This study investigated selected factors within the possible control of the employing institution that may be related to stress responses of newly graduated nurses.

Problem of Study

The problems of this study were to:

1. Examine the correlation of trait anxiety of newly graduated nurses, as measured by the Trait Anxiety Inventory, and the level of stress response, as measured by the Psychological Distress Scale.

2. Examine the correlation of the level of stress responses of newly graduated nurses, trait anxiety, and selected occupational factors, as obtained by the Chovanec Occupational Factors Questionnaire.

Justification of Problem

In 1974, McCloskey surveyed 94 staff nurses from 13 randomly selected hospitals to determine the influence of rewards and incentives on turnover rate. She found that newly graduated nurses had the highest turnover rate (61%) with the cost to the hospital for replacement estimated at \$20 million dollars. The cost to the patient and the cost to the dissatisfied nurse must also be considered. Because of the low availability of staff replacements and the learning time required for new nurses to reach peak efficiency, the quality of patient care is reduced (White & Maguire, 1973). The cost to the newly graduated nurse includes

not only the monetary loss, but also the decrease in morale, a feeling of disequilibrium, disorganization, and emotional distress (Schmalenberg & Kramer, 1979).

Occupational stress is generally seen and measured by the reactions of the individual to situations perceived consciously and unconsciously as threatening (McLean, 1974). McLean stated that there are three major threats that may disturb one's psychological equilibrium: (a) the threat of losing control of oneself, (b) the threat to one's conscience or superego, and (c) the threat of personal physical harm. Psychological stress may be defined as the activation of any one of these three threats. McLean also found that there was a common denominator to occupational stress: change. Change may take the form of people, places, organizational supports, or the ways of doing things. Change is a threat to the ways people have developed their ability to cope with the perceived stress. Through his review of research, McLean demonstrated relationships between stress and productivity, morale, and job satisfaction.

Margolis and Kroes (1974) defined job stress as the condition in which some factor at the job situation

interacts with the worker to disrupt his psychological or physiological homeostasis. When the worker's needs are frustrated or his abilities and responsibilities are mismatched, job strain is likely to result. There are short-term subjective states of anxiety, tension, anger, and the like that occur in close proximity to specific job stressors. This type of response can be differentiated from the more chronic responses, such as depression, fatigue, and physiological manifestations. Margolis and Kroes suggested that understanding of the job stress might help in the selection of workers and the modification of stressors.

Reality shock, the conflict resulting from the movement from the familiar subculture of school to the unfamiliar subculture of work, has been the subject of research by Kramer and Schmalenberg (1978). These authors found that the movement from school to nursing practice could create feelings of helplessness, frustration, and dissatisfaction for the newly graduated nurse. Schmalenberg and Kramer (1979) examined ways that an employing institution could assist the newly graduated nurse with role transformation. They found that an organization's needs often compete with the

individual needs of the employee. When this happens, some realignment of these needs is mandatory if the organization is to survive and if the employee is to derive any job satisfaction. Two major concerns were identified. One concern is the lack of knowledge of or dislike for the characteristics of the system, such as policies, staffing, and impersonality. The second concern emanates from differences between the individual and organizational needs, such as accomplishment of goals, formal requirements, and socialization. Both concerns may result in conflict between the employing institution and the newly graduated nurse resulting in increased stress for the individual nurse (Schmalenberg & Kramer, 1979).

Cooper and Marshall (1975) stated that there are two central features of stress at work. It is the interaction of these features that determines either coping or maladaptive behavior and stress-related disease. These features are: (a) the dimensions or characteristics of the person and (b) the potential sources of stress in the work environment.

Occupational stress increases the risk of illness, decreases job satisfaction and morale, results in a

loss of dollars and work hours, and may result in a decrease in the quality of patient care provided by the nurse (Frusha, 1977). For these reasons, the relationship between job characteristics, personal factors, and the level of occupational stress must be examined. Few studies in this area of nursing have been published, especially with the focus on the newly graduated nurse. Trait anxiety, selected occupational factors, and the level of stress response of the newly graduated nurse were the focus of this study.

Theoretical Framework

Examination of the psychological aspect of stress reveals that the human being is particularly vulnerable to stress producing situations. This is due to the fact that the higher cortical functions allow man to react to actual and perceived threats of danger.

Lazarus (1966) proposed a theory of stress as a psychological problem.

Stress, from a homeostatic viewpoint, is a stimulus condition that results in system disequilibrium and produces a dynamic kind of strain. On the stimulus side, conditions that may produce a stress reaction include: uncertainty about physical survival, maintenance of

one's identity, the ability to control one's environment even a little, or the opportunity to avoid pain and privation. All stimuli encountered by the individual are appraised as either harmful, benign, or beneficial. Lazarus (1966) identified threat as a key intervening variable in psychological stress. He defined threat as the anticipation of a future confrontation with harm that is based on cues which are appraised by cognitive processes.

Cognitive appraisal consists of two phases: (a) primary appraisal and (b) secondary appraisal. Primary appraisal determines the presence and degree of threat produced by the stimulus event. Secondary appraisal is concerned with the coping process necessary to reduce the threat. The nature of the stimulus, personality characteristics, past experience, intelligence, educational background, and the person's self-appraisal are factors that may influence both phases of appraisal. People are exposed daily to a vast amount of stimuli. When these stimuli are irrelevant to the goals and the values of the person involved, no threat appraisal occurs. If the stimulus condition occurs that may interfere with the attainment of a goal or conflicts with the person's

value system, then it is likely to be appraised as threatening (Lazarus, 1966).

On the response side of psychological stress, four main classes of reactions have been used to index stress. Reports of disturbed affects, such as anxiety, fear, anger, and depression represent the first category of stress responses. This response class often prompts the individual to seek professional assistance. Secondly, motor behaviors, such as increased muscle tension, speech disturbances, and particular facial expressions, may also signify stress reactions. The third category, change in the adequacy of cognitive functioning, has often been used as an indicator of stress in research studies. Perception, thought, judgment, problem-solving, and social adaptation may be affected by stress. Lastly, physiological changes are the most widely used indicators of stress. Stress has been related to changes in adrenal cortical secretions, blood pressure, heart rate, skin temperature, and the occurrence of specific disease processes (Lazarus, 1966).

Anxiety is one emotion that has been frequently associated with psychological stress. Anxiety is

a negative affect or emotional state which occurs in response to threat appraisal. Lazarus (1966) stated that anxiety is an affective response. After the initial response, anxiety is generally replaced by another affective state as the object of harm is identified. If anxiety becomes a chronic or disproportionate response state, the person is judged as having a tendency to appraise any situation encountered as threatening. This individual appears to view his overall environment as harmful and to see his resources as inadequate. This affective tendency has been called trait anxiety, which is a state of anxiety that occurs often. Trait anxiety is associated with the person who is anxious regardless of the situation, and may be useful in predicting other behaviors (Lazarus, 1966).

In summary, Lazarus (1966) viewed psychological stress as threat appraisal by cognitive processes within the context of a stimulus condition, resulting in a stress response. Anxiety may be considered as an intervening variable in the context of a trait of the individual. This study, based on Lazarus' theory, examined the relationship among selected occupational factors, which may be viewed as stimulus conditions,

trait anxiety, and the measurable stress response of the newly graduated nurse.

Assumptions

For purposes of this study, the following assumptions were made:

1. Man is an open system dynamically interacting with his environment.

2. The stimulus conditions producing stress reactions are numerous and varied.

3. Stress reactions and coping mechanisms are influenced by the nature of the stimulus condition, personality characteristics of the individual, and variables from past experience.

4. Occupational factors may influence the stress response of newly graduated nurses.

Hypotheses

The hypotheses for this nursing research study were:

1. There is no significant relationship between trait anxiety of newly graduated nurses, as measured by the Trait Anxiety Inventory, and their level of stress response, as measured by the Psychological Distress Scale.

2. There is no significant relationship between the level of stress response of newly graduated nurses and the variables of trait anxiety and selected occupational factors, as measured by the Chovanec Occupational Factors Questionnaire.

Definition of Terms

For the purposes of this study, the following terms were defined:

1. Newly graduated nurse--a person who has completed the educational requirements of a school of nursing within the past 6 months and has obtained licensure in the state of Texas, or is eligible for application for licensure, as a registered nurse.

2. Trait anxiety--a relatively stable individual tendency to respond with anxiety to situations perceived as threatening. This anxiety proneness may be measured by the Trait Anxiety Inventory (Spielberger, Gorsuch, & Lushene, 1970).

3. Stress response--the reaction of an individual to a stimulus condition perceived as threatening. The reaction may be in the form of disturbed affect, change of motor behavior, change in cognitive function, or physiological changes (Lazarus, 1966). This stress

response may be measured by the Psychological Distress Scale (McLachlan, 1977).

4. Selected occupational factors--job characteristics that are feasibly within institutional control that may be related to the stress response of the newly graduated nurse. The eight specific job characteristics examined were: (a) having requests honored by nursing administration, (b) assuming charge nurse responsibilities of the patient care unit, (c) being assigned to other patient care units than the one permanently assigned, (d) being assigned to work with a "buddy" or a "preceptor," (e) having to stay late to complete assigned work, (f) having scheduled inservice programs available, (g) having planned discussions with other new nurses, and (h) receiving feedback from nursing supervisors. Frequency of occurrence of these job characteristics, as perceived by the newly graduated nurse, may be measured by the Chovanec Occupational Factors Questionnaire.

Limitations

The following factors limited the generalizability and conclusions of the study:

1. Personal intervening variables at the time of completion of the questionnaires may have affected the individual's level of stress response.

2. The geographical area for selecting the participants was limited to one large metropolitan city in the Southwest.

3. Respondents of the survey may have differed from nonrespondents.

Summary

Research has shown that occupational stress may increase the risk of illness for the employee, decrease job satisfaction, and may result in a decrease in the quality of patient care provided by the nurse. This research study, based on Lazarus' theory of psychological stress, examined the relationship among the variables of trait anxiety, selected occupational factors, and the level of stress response of the newly graduated nurse.

CHAPTER 2

REVIEW OF LITERATURE

Work is a major part of most people's lives. The function of work has been described as a process offering economic self-sufficiency, status, family stability, and an opportunity to interact with others in one of the most basic activities in society (Work in America, 1972). As a significant component of life, work may be perceived as exciting, challenging, and satisfying while at the same time become potentially harmful if the demands of the job exceed the individual's capacity. Occupational stress, thus, is the result of an interaction between the individual and the work environment.

Many aspects of occupational stress in nursing have been subjects of opinion articles and research studies. In 1974, Kramer began to concentrate on the stresses of the newly graduated nurse, in regard to the role transition from student nurse to employee.

Chapter 2 presents a discussion of the literature related to occupational stress and the newly graduated nurse. Specifically, the areas of focus will be three:

(a) occupational stress and studies of its possible effects, (b) studies of stress factors in nursing, and (c) studies related to occupational stress factors and the newly graduated nurse.

Occupational Stress

The concept of stress was first introduced more than 4 decades ago (Selye, 1974). Selye defined stress as "the nonspecific response of the body to any demand made upon it" (Selye, 1974, p. 14). He looked at the effects of stress from a physiologic viewpoint, seeing the body's response, basically, as an adaptive reaction attempting to return the person to a steady state. He named this phenomenon general adaptation syndrome (GAS) and found that it was immaterial whether the agent or situation initiating the response was pleasant or unpleasant. Selye felt that stress was necessary to maintain life but that intense or prolonged stress responses resulted in irreparable tissue breakdown and should be avoided (Selye, 1974).

As Selye and others continued to examine the stress response, research branched to other areas outside medicine. During World War II, Grinker and Spiegel (1945) made careful observations of a large number of

combat fliers in Europe. These authors found that if the stress was severe enough and if exposure to it was sufficiently prolonged, adverse psychological symptoms may develop in anyone. They pointed out that the symptoms that appeared were based on individual personality characteristics and the earlier experiences of the individual. It has been stated that the studies of Grinker and Spiegel laid the groundwork for clinically studying occupational stress and the individual's reaction (McLean, 1979).

There has been a tremendous amount of research associated with occupational stress. Many studies of the work environment began with and today include a look at the physical and chemical work environment (Mayers, 1969). Of more interest in this research study are the studies concerned with the psychosocial aspects of work, the relationship between stressors on the job, and the physical and emotional changes in individuals.

A major source of occupational stress is a person's role at work. Two areas, role conflict and role ambiguity, have been a focal point of research (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964). Role conflict exists

when an individual in a particular work role is torn by conflicting job demands. Role ambiguity is conceived as a discrepancy between the amount of information a person has and the amount he requires to perform his role adequately. The information reported was based on both an intensive study involving 53 people from several major corporations, and a national interview survey of 1,500 respondents (Kahn et al., 1964). It was found that men who suffered more role conflict had lower job satisfaction, higher job-related tension, and less confidence in the organization itself. Greater role ambiguity resulted in lower job satisfaction, high job-related tension, greater futility, and lower self-confidence.

Another factor intrinsic to the job is work overload. Based on their previous studies of 253 men employed at Goddard Space Flight Center and 165 men from Kennedy Space Center, French and Caplan (1970, 1973) differentiated work overload in terms of quantitative and qualitative overload. Quantitative means simply having too much to do; qualitative means the work is too difficult. They found that both were related to an increased stress response producing such

symptoms as job dissatisfaction, job tension, lower self-esteem, and physiologic changes such as high cholesterol levels and increased heart rate.

Quantitative overload has been the subject of other research studies. Russek and Zohman (1958) studied 100 coronary patients in an effort to gain insight into predisposing influences concerned with the development of coronary disease. They found that within the sample population that 25% had been working at two jobs and an additional 46% had worked at jobs which required 60 or more hours per week. In another 20% of the group there was unusual fear, frustration, or inadequacy reported. Thus, 91% of the test subjects had been under considerable occupational stress prior to the onset of clinical symptoms. Similar stress was observed in only 20% of the control subjects. Another study examined job stress of 1,496 employed persons (Margolis, Kroes, & Quinn, 1974). Quantitative work overload was found to be significantly related to such indicators of stress reaction as excessive drinking, low motivation to work, low self-esteem, and absenteeism. Work overload cannot be viewed in isolation, but must be seen relative to the individual's personality, perceptions, and interaction in the work environment.

Cooper and Marshall (1976) offered a model of stress at work, putting together much of the research in the field. They proposed five basic sources of stress at work: (a) factors intrinsic to the job, such as poor working conditions and time pressures; (b) role in the organization, including role conflict and role ambiguity; (c) career development; (d) relationships at work--boss, subordinates, and peers; and (e) organizational structure and climate which may include restrictions in behaviors and lack of effective consultation.

Cooper and Marshall (1976) stated that the sources of stress at work interact with the individual characteristics, such as anxiety level and physiological parameters as heart rate and blood pressure. Extra-organizational sources of stress, as family and financial problems, may influence the individual, changing the vulnerability to the presence of stressors. This interaction leads then to occupational ill health (depression, job dissatisfaction, drinking, etc.) and may result in disease, such as coronary heart disease or mental ill health. There is a growing body of evidence that occupational stress may be linked to these diseases (Margolis et al., 1974; McLean, 1979).

As stress is encountered, the individual may utilize various coping mechanisms to deal with it and reduce the tension it causes. Normal responses used in coping with stress include swearing, crying, laughing, and fantasy. If the stress becomes very great, the ego will resort to exaggerated forms of these normal coping styles or revert to more severe reactions as repression, depression, excessive fantasy, and even detachment from reality (Menninger, 1954).

The physiologic effects of stress have become the subject of a great amount of research in the past years. Stress has been linked with multiple disease processes as gastric ulcers (Goldman & Rosoff, 1968), hypertension (Miller & Grim, 1979), headaches (Packard, 1976), and coronary heart disease (Russek & Zohman, 1958). Even obesity, caused by excessive food consumption, has been linked with stress (Rowland & Antelman, 1976).

Many studies exist in the area of occupational stress and its effects. This section of the literature review has highlighted relevant research in areas that may have an impact upon this research on occupational stress and the newly graduated nurse. The review has involved stress in general, role conflict and role

ambiguity, work overload, a model of stress at work, and psychologic and physiologic effects of stress.

Stress in Nursing

Much of the research on stress in the hospital has focused on the patient. Only in the past decade has the health care professional become the subject for research in identifying and reducing the effects of stress. The quality of patient care depends greatly upon the people providing the care and the effectiveness is a function of the health care professionals' psychological state as well as their technical expertise (Hay & Oken, 1972).

Aguilera, Messick, and Farrell (1970) described factors that helped determine the ability of the individual to maintain equilibrium in a stressful situation. The three major determinants were: (a) perception of the event, (b) available situational support, and (c) coping mechanisms. These three factors will be utilized in looking at stress in the nurse.

Sources of stress as identified by nurses are one way to examine the nurse's perception of the events of a stressful situation. The majority of these studies have focused on intensive care units and coronary care

units. In 1969, Vreeland and Ellis were among the first to examine and publish observations of stresses placed on the nurse in an intensive care unit. They concluded that in order to care effectively for each patient as an individual, the nurse must have a thorough knowledge of many disease processes and pertinent information about the individual. The nature of the patient necessitated constant intensive observation. The workload was demanding with not only the physical demands of the patient, such as turning and dressings, but also the vast amount of equipment. Psychological support of both the patient and family during a life-threatening event may be a source of anxiety for the nurse. Vreeland and Ellis felt much of the responsibility for the patient's recovery rests with the nurse. In an area where emergencies occur frequently, the nurse must be ready to act quickly and knowledgeably; at times making decisions that might normally fall on the physician. Helping the patient requires a high level of nursing competency and in meeting this demand the nurse may encounter frustration, anxiety, and physical drain.

Hay and Oken (1972) observed and interviewed the nursing staff of a 19-bed university hospital intensive

care unit over the period of 1 year. Hay and Oken found the Intensive Care Unit (ICU) environment, the workload and its demands, and the necessary contacts with family, doctors, and administrators were a constant source of stress for the nurse. Hay and Oken felt the self-esteem of the nurse was constantly taking a beating by the psychological demands of a necessary level of knowledge and technical skill, the involvement with the patients, and the constant threat of death. They went on further in the article to offer suggestions to help decrease the stress of nurses by: (a) group meetings of nurses to offer support and direction, (b) rotation of staff out of the intensive care areas for a brief time to allow rest, (c) full-time physician in the unit to help with decision-making, and (d) lounges away from the unit for breaks from the work schedule.

Gentry, Foster, and Froehling (1972) attempted to quantitatively assess the psychologic, emotional response of 34 nurses to working in an intensive and nonintensive work setting. A battery of standardized psychologic tests was utilized, including the Tennessee Self-Concept Scale, the Zung Self-Rating Depression Scale, the Buss-Durkee Hostility Inventory, and the

Minnesota Multiphasic Personality Inventory. Gentry et al. found in general that intensive care unit nurses reported more depression, hostility, and anxiety. They found no differences in terms of general personality patterns among the nurses. The authors included responses on job satisfaction with their study and concluded the psychologic response of the nurses appeared to be associated with situational stress including an overwhelming workload, too much responsibility, poor communication between nurses and physicians, limited work space, and too little continuing education.

As shown by previous studies the nurse faces many situations that may be stress-producing. Most of the stressors identified can be classified in four major categories: (a) interpersonal communication problems, (b) knowledge base, (c) environmental stressors, and (d) patient care requirements. Huckabay and Jagla (1979) surveyed 46 intensive care unit nurses from 6 different hospitals using these categories. The nurses were asked to rank-order situations according to their degree of perceived stress. Workload, death of a patient, and communication problems between staff and the nursing office were considered the three highest

stressful factors. The knowledge base on the whole was rated as moderate to low intensity with the exception that a significant inverse correlation was observed between years of experience and the stress factor score.

More recent studies of nurses in general are revealing findings consistent with the studies of the 1970s. Not only are there concerns with the patient care component of nursing, but also with how organizational management affects the nurse. Health care managers must look at organizational factors that affect the stress levels of nurses. When job previews are realistic and expectations are presented objectively, lower turnover rates of the new nursing staff can be expected because expectations are more closely connected to the job and congruency is an anticipated result (Appelbaum, 1981).

Ivancevich and Matteson (1980) surveyed 82 nurses in a large public hospital in the Southwest in an attempt to identify job factors that created stress for the nurse. They divided the sources of stress into two categories: organization, those factors that are a part of the hospital's procedures, policies, and

programs; and job, stressors inherent in the job itself. The nurses were asked to rank items in these two categories from "never" (1) to "always" (7) regarding a source of stress. They found the five most stressful organizational items were human resource development, politics, working conditions, rewards, and communications. The job category revealed the most stressful areas were responsibility for people, time pressures, role conflict, relations with other nurses, and relationships with superiors.

Information on stress and the nurse is becoming more prevalent in the literature. Scully (1980) defined in working terms for the nurse, what stress is, the symptoms, the effects, and suggestions for action. Hospitals are beginning to incorporate stress management seminars in nursing continuing education programs to help the nurse deal with these daily pressures (Bailey, 1980). Reduction in the stressors for the nurse must be a concern for the hospital, as well as helping the nurse cope with these stressors.

Newly Graduated Nurses

Entry into the work force for a newly graduated nurse can be an exciting and stressful experience.

The first job may become a proving ground for self-competency as well as an opportunity to formulate and test one's personal philosophy of nursing. Due to the cost to both the institution and to the profession of nursing, turnover of nurses is an area of widespread interest.

Corwin (1961) conceptualized the transition from student to staff nurse status in terms of professional-bureaucratic conflict. He felt that socialization to a professional role occurred during the nurse's training. This presented the problem in that the ideals of the profession are stressed during training, and once the nurse reaches practice there is a conflict due to the fact that the ideals cannot always be practiced in the hospital setting.

Reality shock, the conflict resulting from the movement from the familiar subculture of school to the unfamiliar subculture of work, has been the subject of concern in studying newly graduated nurses (Schmalenberg & Kramer, 1979). It has been found to be a significant factor in the almost one-third exodus rate of nurses from the practice of nursing within a few years of graduation (Kramer & Baker, 1971). The

issue of socialization, the conflicts inherent in the job, and some of the problems newly graduated nurses encounter must be dealt with if retention of nurses is to become a reality.

Kramer and Schmalenberg (1976) identified the role transformation from student to staff nurse as a process usually consisting of four phases. In the first phase, the honeymoon phase, the newly graduated nurse sees everything as wonderful. Major activities of this phase include mastery of nursing skills and routines and social integration. When the nurse attempts to accomplish a goal and finds the way blocked either by her own inadequacies or deterrents in the system, shock sets in. This second stage, shock phase, is characterized by moral outrage, rejection, fatigue, and perceptual distortion. As this phase is extremely exhausting and continually upsetting, eventually, the nurse must progress to the next phase.

The recovery phase is the third stage in the process of role transformation (Kramer & Schmalenberg, 1976). The newly graduated nurse begins to discriminate between good and bad. With perspectives in balance, the nurse may recover and move into the last phase, resolution.

There are several ways in which the nurse may resolve the conflict: (a) throw over the school values and accept those prized in the work scene, (b) return to school, (c) turn the conflict inward, (d) change jobs, or (e) integrate both the school and work values.

Kramer (1974) began with research for the socialization of the nurse in the education program. She developed a program entitled "Anticipatory Socialization" to help student nurses deal effectively and rationally with conflicts of the work value system. It was found that the program was highly effective in helping student nurses make a successful role transformation. They were better able to handle the reality shock they encountered, behave more professionally, and engage more actively in change at the job.

The second phase of research to assist newly graduated nurses was the Role Transformation Program (Schmalenberg & Kramer, 1979). This program consisted of a series of seminars, individualized instruction, and workshops instituted at individual hospitals through the inservice departments. Since reality shock can be a lonely and frustrating experience, new graduate seminars allowed the nurse to share experiences and

feelings with others, drawing support and guidance for others. Through a structured program, Schmalenberg and Kramer (1979) showed that the stresses and anxieties of role transformation can be decreased leading to growth and effective resolution of conflict. The individual and the organization both may benefit by minimizing the competing role pressure (Schmalenberg & Kramer, 1979).

Since the results of research by Kramer and Schmalenberg (1976) have become known to the nursing community, several articles have been published suggesting improved or alternate methods to assist the role transition of the newly graduated nurses, thus decreasing stressors and job dissatisfaction and promoting retention. Meisenhelder (1981) suggested an orientation program structured by teaching objectives that encouraged self-direction, explicit expectations, verbalization of feelings, as well as clinical expertise. Emphasis must first be on the delivery of physical care. Meisenhelder found that presently the work setting offers too little explicit direction for the complex demands. Clear direction and feedback are necessary for the emotional and educational growth of the new nurse.

Plasse and Lederer (1981) studied the value of preceptors for newly graduated nurses. These authors found that the use of designated, experienced preceptors early in the new nurses' work experience assisted in guiding the newly graduated nurses through the orientation and socialization process, while explaining new content. Preceptors also served to minimize the frustrations of orientation and, thus, may potentially decrease the overall turnover rate.

Job dissatisfaction is one area that was frequently associated with occupational stress. Cronin-Stubbs (1977) attempted to look at factors that affected job satisfaction of 30 newly graduated nurses. The most notable findings were that nurses consistently described recognition as a factor leading to feelings of satisfaction. The most significant dissatisfier was responsibility. Nurses felt that they had been given too much responsibility too soon especially in assuming charge positions. Since an employing organization spends considerable time and money in the orientation of a newly graduated nurse, information regarding factors that affect job satisfaction and stress levels is highly desirable.

Summary

Occupational stress is a complex concept that may be costly both to the individual experiencing it and the employing organization. This review of literature has attempted to tie together research studies pertinent to occupational stress and the newly graduated nurse. Studies identifying the concept of stress along with the psychologic and physiologic effects have been cited. Numerous studies of stress in the profession of nursing were reviewed. Although many of the studies are specific to the intensive care units, information gained may be applicable to other areas of nursing. The review of literature concluded with studies and findings directly related to the newly graduated nurse, offering suggestions for easing the stress of role transition.

CHAPTER 3

PROCEDURE FOR COLLECTION AND TREATMENT OF DATA

The purpose of this study was to examine the possible relationships among the variables of trait anxiety, selected occupational factors, and the level of stress response of newly graduated nurses. A descriptive correlational design was utilized to test the hypotheses in this study. The main intent of this study was to describe relationships among the variables. There were no cause and effect relationships assumed. Three self-reporting questionnaires were used to examine each of the variables in this study. Descriptive statistics, linear regression, and multiple regression were used in the analysis of the data.

Setting

The population of newly graduated nurses was drawn from three hospitals in a large metropolitan city in the Southwest. Each hospital had at least 500 patient care beds and offered multiple services, including critical care. Two of the selected hospitals were

private institutions, while the third was a large city-county hospital. All three hospitals employed newly graduated nurses and offered them a variety of settings and shift rotations. All three hospitals required a central and unit orientation for newly employed nurses.

Population and Sample

The population for this study was all newly graduated nurses employed at the three designated hospitals at the time of data collection for this study, who had completed their basic nursing educational program within the past 6 months, and were eligible to take, or had taken the State Board Examination for Licensure as a Registered Nurse. For the purpose of this study, the total population served as the sample.

Protection of Human Subjects

The subjects' human rights were protected in several ways. Prior to data collection, permission was obtained from the Human Subjects Review Committee (Appendix A) and from the graduate school at Texas Woman's University (Appendix B). Written permission was also obtained from the participating hospitals (Appendix C).

Each subject received a mailed written explanation of the research study (Appendix D). This letter included the following: (a) a brief explanation of the study, (b) a description of the possible risks of participation, (c) a description of the benefits to be expected from the results of the study, (d) an explanation that participation or nonparticipation would have no effect on the subject's job, (e) an offer to answer any questions, (f) an explanation that the subject's identity would remain anonymous and that all information disclosed would be confidential, and (g) an explanation that no medical service or compensation would be provided to subjects by Texas Woman's University as a result of participation in the study. This letter, as well as the questionnaires, included the statement that return of the questionnaires would be construed as informed consent to act as a subject in the research study.

The subjects were not asked to sign the questionnaires; therefore, privacy, anonymity, and confidentiality of the information disclosed by each subject were maintained. All questionnaire were kept under lock and key during the study and destroyed following the

completion of the study. Individual results of the questionnaires were not available; however, the subjects were informed that the results of the study would be available through the Nursing Continuing Education Department of their hospital.

Instrumentation

Three instruments were distributed by the participating hospitals to each of the study subjects. The instruments utilized in this study were: the Chovanec Occupational Factors Questionnaire (Appendix E), the Trait Anxiety Inventory (Appendix F), and the Psychological Distress Scale (Appendix G).

The Chovanec Occupational Factors Questionnaire, developed by the researcher, is a self-reporting questionnaire that elicited information on eight demographic items and eight selected job characteristics. The questionnaire utilized several methods for obtaining information: short answers, yes-no responses, and a Likert-type scale to indicate frequency of situations related to the subjects' jobs. The subjects were asked their age, level of nursing education completed, previous work experience, and whether other newly graduated nurses were assigned to their unit. This information

was utilized to describe the sample. Date of graduation, reference to licensure, and date of employment were questions that were utilized to determine the subject's inclusion in the study.

The eight job characteristics that were used in the Chovanec Occupational Factors Questionnaire were developed from a review of the literature. The eight factors selected were ones that were within the possible control of the employing organization. These eight job characteristics were: having requests honored, assuming charge nurse responsibilities, being assigned to work on other patient care units than the one permanently assigned, being assigned to work with a "buddy" or a "preceptor," having to stay late to complete assigned work, having scheduled inservice programs available, having planned discussions with other new nurses, and receiving feedback from nursing supervisors.

Newly graduated nurses identified that job requirements often spilled over and interrupted their private lives, creating an inter-role conflict (Schmalenberg & Kramer, 1979). Honoring of requests and staying late to complete assigned work were job-related factors included on the questionnaire from this area.

Competency was a great concern for newly graduated nurses. According to several research studies, one way the organization may help the newly graduated nurses is to offer programs that may increase the overall knowledge base, competence in technical skills, and ability to make correct clinical judgments (Meisenhelder, 1981; Schmalenberg & Kramer, 1979). Frequency of scheduled inservice programs designed to help newly graduated nurses increase their competence in providing good patient care was included as one of the job characteristics. Reassignment to other patient care units, another questioned job characteristic, may affect both the organization and the individual nurse if there is a mismatch between the abilities of the nurse and the needs of the unit. The discrepancy between skills and judgmental abilities possessed and those required can compromise the quality of patient care (Schmalenberg & Kramer, 1979). Cronin-Stubbs (1977), in studying job satisfaction of newly graduated nurses, found that the most significant dissatisfier was too much responsibility too soon, especially in assuming charge positions. Thus, this factor was included in the questionnaire.

Three other characteristics (preceptors, discussions with other new nurses, and feedback from supervisors) were addressed in the Chovanec Occupational Factors Questionnaire. Plasse and Lederer (1981) found that the use of designated preceptors helped to decrease the frustrations of orientation, while assisting in explaining new content. Discussions among new nurses may also affect the stress response of newly graduated nurses by helping them to develop an awareness of the process they are experiencing, as well as drawing support from the group (Meisenhelder, 1981; Schmalenberg & Kramer, 1979). The final job characteristic addressed was the frequency of feedback from supervisors. Feedback is necessary for the individual nurse to evaluate actions on the job. If the newly graduated nurse is to improve in meeting the expectations of the job, input as to how well expectations are being met is required (Meisenhelder, 1981; Schmalenberg & Kramer, 1979).

The Trait Anxiety Inventory, developed and copyrighted by Spielberger et al. (1970), is a self-evaluation questionnaire that consists of 20 statements that asked the person to rate how they generally felt.

This inventory measured trait anxiety, the relatively stable individual tendency to respond with anxiety to situations perceived as threatening. This measurement of trait anxiety was scored on a 4-point scale: 1--almost never, 2--sometimes, 3--often, and 4--almost always. The possible score ranged from 20 to 80. A high score suggests a high degree of trait anxiety (Spielberger et al., 1970).

Test construction of the State-Trait Anxiety Inventory began in 1964 with the intent of developing one scale that would provide objective self-report measures of both state and trait anxiety. The test construction strategy was modified to two scales, one for trait anxiety and one for state anxiety. Since its development, the scale has been used in numerous studies. Test-retest reliability data revealed that the reliability coefficients for college undergraduates ranged from .73 to .86 for trait scores. Alpha coefficients for the Kuder-Richardson formula 20 (K-R 20) for high school juniors, college freshmen, and introductory psychology students ranged from .86 to .92 for trait scores. Validity for the trait anxiety scores was estimated by correlating the results with

three other anxiety scales, the IPAT Anxiety Scale, the Taylor Manifest Anxiety Scale, and the Zuckerman Affect Adjective Checklist. Coefficients for concurrent validity for college females were .75, .80, and .52 respectively, and .76, .79, and .58 respectively for college males (Spielberger et al., 1970).

The Psychological Distress Scale (McLachlan, 1977), a state measure of stress, is a self-evaluation questionnaire consisting of 33 true-false statements. The answers or responses to the statements are expected to change as different levels of stress are experienced by the individual. Items on the scale were taken from the Minnesota Multiphasic Personality Inventory. The 33 items represent three symptom areas frequently associated with the ability to cope with stress: somatic, cognitive, and affective. The possible scores range from 0 to 33, with the higher scores indicative of a higher level of state stress (McLachlan, 1977).

The Psychological Distress Scale was found to be internally consistent. Alpha coefficients for the Kuder-Richardson formula 20 (K-R 20) were .83 for 200 males and .84 for 100 females. The test-retest reliability coefficient was .79 for the combined group.

The subjects used for testing were alcoholics that had been readmitted for treatment after 2 years. They were detoxicated, chronic alcoholics undergoing a 1 month inpatient treatment program. Concurrent validity was established by correlating the results with other complete scales of the Minnesota Multiphasic Personality Inventory. The Psychological Distress Scale was correlated highly with two scales: one scale in which several anxiety items are reverse scored and the scale that is associated with ego strength. The Psychological Distress Scale was also found to correlate with a short adjective checklist determining state anxiety (McLachlan, 1977).

Data Collection

Following agency approval and approval from the graduate school, a list of newly graduated nurses was prepared by the nursing department of each of the three participating hospitals. A packet was prepared, by the researcher, for each newly graduated nurse. Each packet contained a letter of explanation and instructions, a Chovanec Occupational Factors Questionnaire, a Trait Anxiety Inventory, and a Psychological Distress Scale. A self-addressed stamped envelope was

included in each packet for return of the questionnaires to the researcher. Instructions for completion and return of the questionnaires were included in the letter. The packets were then labeled with the newly graduated nurses' names and units. The labeling of the packets for two of the participating hospitals was done by the researcher. The third hospital's research committee provided this service. There was no attempt to code the questionnaires and the subjects were asked not to sign anything, thus preserving the anonymity of the participants. The packets were then distributed to each newly graduated nurse at each of the three hospitals.

The subjects were asked to complete and return the questionnaires by a specific date indicated in the letter. This date was approximately 2 weeks following the distribution of the packets. The subjects were informed in the letter that all new graduates would receive a follow-up letter in 2 weeks if the response rate was low. Due to the response rate, the follow-up letter was not necessary.

Treatment of Data

Descriptive statistics were utilized for compiling the demographic data. Interval data, such as age, was reported using means and standard deviations. Ordinal and interval data, such as the educational level, were reported using frequency of occurrence.

The data obtained in this study with regard to occupational factors, trait anxiety, and stress response were analyzed by regression analysis. This is a statistical method for understanding the effects of one or more independent variables on a dependent variable. Regression analysis allows researchers a mechanism for making predictions about the phenomena utilized in the study (Polit & Hungler, 1978).

For Hypothesis 1, the procedure utilized to determine the relationship between trait anxiety and the level of stress response was a simple linear regression. This regression analysis was used because there was one variable, trait anxiety, being utilized to predict a second variable, the level of stress response (Polit & Hungler, 1978).

Multiple regression analysis was used for the treatment of data associated with Hypothesis 2. This

statistical method was utilized due to the fact that the intent was to examine the relationship among trait anxiety, selected occupational factors, and the level of stress response of the newly graduated nurse (Polit & Hungler, 1978).

The regression analysis yielded output that consisted of two important units of information, the regression equation and the coefficient of correlation. The regression equation yields a basis for predicting values for the dependent variable once the values for the independent variables have been determined. The multiple correlation coefficient (R) is often referred to as the coefficient of correlation. The correlation coefficient is an index of the degree to which the variables are related to each other. The multiple correlation coefficient when squared (R^2) indicates the proportion of variance of the dependent variable that may be explained by the combined influences of the independent variable (Polit & Hungler, 1978).

The selection of a level of significance determines the chance of rejecting a hypothesis when it is actually true, Type I error (Polit & Hungler, 1978).

The level of significance for this study was set at .05.

CHAPTER 4

ANALYSIS OF DATA

This descriptive correlational study was designed to determine the relationship among the variables of trait anxiety, selected occupational factors, and the level of stress response of the newly graduated nurse. Three self-reporting questionnaires were utilized to collect the data. The analysis of this data is reported in Chapter 4. The sample is described according to the variables of the study. The results of the regression analysis of the data are presented. Findings derived from statistical manipulation of the data are reported as they apply to each of the two hypotheses established prior to the study. This chapter concludes with a summarization of the results.

Description of the Sample

A total of 151 packets was distributed to newly graduated nurses at the three participating hospitals. A total of 80 (52.9%) nurses returned the questionnaires. Four of the questionnaires were returned unanswered. Two questionnaires were not used in the

data analysis due to the fact the subjects indicated that they had been employed as registered nurses prior to their recent graduation from a baccalaureate program. Two questionnaires were returned several weeks after the data collection cutoff date.

The sample utilized in the analysis of data consisted of 72 newly graduated nurses. Each of these 72 nurses completed and returned the questionnaires within 6 months of graduation from their nursing educational program and had taken, or applied for, the State Board Examination for Licensure as a Registered Nurse. Therefore, each of the 72 newly graduated nurses met the criteria for inclusion in this research study.

Descriptive statistics were used to summarize the data collected on the demographic variables. Demographic data included age, level of nursing education completed, length of employment, prior work experience in general and specifically in the hospital currently employed, and whether or not other newly graduated nurses were employed on the same patient care unit.

The age of the sample population varied widely. The ages of the newly graduated nurses ranged from 20 to 52 years with the largest percentage in the age

group of 20 to 29 years (Table 1). The mean age was 25.31 years with a standard deviation of 5.1 years. One newly graduated nurse did not answer the question on age.

Table 1
Age Distribution of the Sample

Range	Frequency	Percentage
20-29 years	61	85.9
30-39 years	8	11.3
40-49 years	1	1.4
over 50 years	1	1.4

$\underline{n} = 71$.

The level of nursing education completed was the second demographic variable analyzed. Of the 72 newly graduated nurses, 23 (31.9%) had completed the associate degree program, 5 (7%) nurses had completed a diploma program, and 44 (61.1%) nurses had received a baccalaureate degree.

The third demographic variable reviewed was the length of employment of the newly graduated nurse. The length of employment ranged from 1 month to 5 months

for the sample. The mean length was 3.91 months, with a standard deviation of 0.99 months.

Prior experience as a nursing aide or a Licensed Vocational Nurse (LVN) was the fourth demographic variable. Of the 72 newly graduated nurses in the sample population, 57 (79.1%) had previously worked as a nursing aide. Nine of the newly graduated nurses had been employed as an LVN, which was 12.5% of the sample. Five (6.9%) newly graduated nurses had worked previously in the capacities of both nursing aide and LVN. Only 11 (15.3%) newly graduated nurses indicated no prior work experience as a nursing aide or an LVN.

To further examine work experience, the newly graduated nurses were questioned about providing patient care at various levels in the hospital in which they were currently employed. Overall, 36 (50%) nurses in the sample had worked in the hospital in some capacity before accepting their present position. Twenty-six (36.1%) of the subjects had participated in patient care in their current hospital as a nursing student as part of their educational requirement. Thirteen (18%) had previously worked as a nursing aide, while only 3 (4.2%) had been employed as an LVN. Two (2.7%)

of the newly graduated nurses had participated in patient care in the hospital in which they were currently employed in other capacities: patient aide and medical records clerk. Fourteen (19.4%) of the nurses had been employed at more than one level.

Table 2 illustrates these data.

Table 2
Prior Work Experience in
Current Hospital

Type of Position	Frequency	Percentage
Nursing student (Educational requirement)	26	36.1
Nursing aide	13	18.0
LVN	3	4.2
Other	2	2.7
Overall--any position	36	50.0

$\underline{n} = 72.$

The final demographic variable examined was whether or not other newly graduated nurses were employed on the same patient care unit as the sample population. The questionnaires revealed that 58 (80.5%) of the newly graduated nurses, who comprised the sample, were

assigned to patient care units in which there were other newly graduated nurses.

The sample may also be described according to the newly graduated nurses' perceptions of the frequency of occurrence of eight selected job characteristics, Questions 9 through 16, on the Chovanec Occupational Factors Questionnaire. These job characteristics include: having requests honored, assuming charge nurse responsibilities, being assigned to work on other patient care units, being assigned to a "buddy" or a "preceptor," having to stay late to complete assigned work, having inservice programs available, having planned discussions with other new nurses, and receiving feedback from nursing supervisors. The newly graduated nurses in this sample rated the frequency of occurrence of these characteristics using the scale: 1--never, 2--rarely, 3--sometimes, 4--usually, and 5--always. Each question will be analyzed separately (Table 3).

In regard to the honoring of requests by nursing administration, the frequency of occurrence ranged between sometimes (3) and always (5). The mean frequency was 4.1 indicating that the majority of responses

Table 3

Frequency of Job Characteristics

Variable	Mean	Standard Deviation	Minimum	Maximum
#9 -- Requests	4.1	0.6	3	5
#10 -- Charge responsi- bilities	2.1	1.4	1	5
#11 -- Work on other units	1.4	0.6	1	3
#12 -- Preceptors	2.1	1.3	1	5
#13 -- Staying late	2.7	0.8	1	4
#14 -- Inservice programs	3.4	1.1	1	5
#15 -- Discussions with new nurses	1.8	1.1	1	5
#16 -- Feedback	3.3	1.1	1	5

was centered around "usually." The sample group of newly graduated nurses was varied in regard to the frequency of serving as team leader or charge nurse of the unit. The range was from never (1) to always (5). The mean for this variable was 2.1 with a standard deviation of 1.4. Working on other patient care units other than the one assigned was found to be a fairly infrequent occurrence among the sample population. The range was between never (1) and sometimes (3), with a mean occurrence of only 1.4.

Being assigned to work with a "buddy" or a "preceptor" ranged from never (1) to always (5) among the group of newly graduated nurses. The mean frequency for this question was 2.1, indicating that the majority of the responses were centered around "rarely." Therefore, more often than not, the newly graduated nurses were not being assigned to work with one special person. In analyzing the responses to having to stay late to complete assigned work, it was found that the frequency ranged from never (1) to usually (4). The mean occurrence for this question was 2.7, with a standard deviation of 0.8.

The final three job characteristics all had scores that ranged from never (1) to always (5). The mean

frequency of scheduled inservice programs was 3.4, with a standard deviation of 1.1. Planned discussions with other new nurses occurred at the mean rate of 1.8, indicating that the mean frequency was less than "rarely." Feedback from nursing supervisors, the final job characteristic, had a mean frequency of 3.3.

Trait anxiety was a major variable in this research study. The scores for the Trait Anxiety Inventory ranged from 23 to 61. The possible range of scores on this instrument was 20 to 80. The mean score for the sample group of newly graduated nurses was 36.9, with a standard deviation of 9.1. Arbitrary division of the scores was accomplished by using the mean and the standard deviation. The low category was defined as being a score less than one standard deviation below the mean (score less than 28). The high category was defined as having a score greater than one standard deviation above the mean (score greater than 46). The middle category was those scores within one standard deviation of the mean (28 to 46). The analysis revealed that 12 (16.7%) of the newly graduated nurses had scores in the low category; 51 (70.8%) scores fell in the middle range; and 9 (12.5%) of the nurses had scores in the high category (Table 4).

Table 4
Arbitrary Division of Scores on
Trait Anxiety Inventory

Category	Frequency	Percentage
Low (less than 28)	12	16.7
Middle (28-46)	51	70.8
High (greater than 46)	9	12.5

$\underline{n} = 72.$

Analysis of the data collected was also computed for scores obtained on the Psychological Distress Scale. The possible range of scores was 0 to 33. The newly graduated nurses sampled had scores of 0 to 19. The mean score was 5.5, with a standard deviation of 4.2. Forty-four subjects (61.1%) had scores between 0 and 5, less than the mean score. Twenty-eight subjects (38.9%) had scores above the mean. In particular, 6 (8.3%) of these newly graduated nurses had scores greater than twice the mean (13 to 19), indicating high levels of psychological distress.

Following this initial descriptive interpretation, regression analysis was performed to examine the

relationship among the variables. This information is presented in the following section.

Findings

Research findings in the present study were analyzed according to the null hypotheses. Each hypothesis is discussed separately.

Hypothesis 1

Hypothesis 1 stated: There is no significant relationship between trait anxiety of newly graduated nurses, as measured by the Trait Anxiety Inventory, and their level of stress response, as measured by the Psychological Distress Scale. This hypothesis was analyzed using a simple linear regression. In this analysis, the level of stress response of the newly graduated nurses was the dependent variable, and trait anxiety was the independent variable. The results indicated that a strong relationship existed between these factors ($\underline{R} = .85$, $\underline{p} < .001$). Table 5 summarizes the statistical results. The proportion of variance of the dependent variable that may be explained by the independent variable was obtained by squaring the correlation coefficient ($\underline{R} = .85$, $\underline{R}^2 = .725$). Therefore,

Table 5

Simple Linear Regression: Trait Anxiety and
Level of Stress Response

	<u>df</u>	Sum of Squares	Mean Square	<u>F</u>	Significance of <u>F</u>
Regression	1	4196.3	4196.3	176.5	<u>p</u> < .001
Residual	<u>70</u>	<u>1664.4</u>	<u>23.8</u>		
Total	71	5860.7	4220.1		

the results revealed that 72.5% of the variation in the level of stress response of newly graduated nurses can be explained by knowing the score on the Trait Anxiety Inventory. Hypothesis 1 was rejected.

Hypothesis 2

Hypothesis 2 stated: There is no significant relationship between the level of stress response of newly graduated nurses and the variables of trait anxiety, and selected occupational factors, as measured by the Chovanec Occupational Factors Questionnaire. Multiple regression was used to determine if a relationship existed among the variables. In this analysis, the level of stress response of the newly graduated nurse was the dependent variable. Trait anxiety and the eight job characteristics, Questions 9 through 16 on the Chovanec Occupational Factors Questionnaire, were the independent variables. The regression was found to be significant (Table 6). Three factors (trait anxiety, Question 14 on frequency of scheduled inservice programs, and Question 16 on frequency of feedback from nursing supervisors) were found to be significant predictors of the level of stress response of newly graduated nurses ($\underline{R} = .86$, $\underline{p} < .001$). The remaining

Table 6

Multiple Regression: Level of Stress, Trait
Anxiety, and Job Characteristics

	<u>df</u>	Sum of Squares	Mean Square	<u>F</u>	Significance of <u>F</u>
Regression	3	915	305	60.5	$\underline{p} < .001$
Residual	<u>68</u>	<u>343</u>	<u>5</u>		
Total	71	1258	310		

six characteristics, requests, serving as charge, working on other patient care units, preceptors, staying late to finish work, and discussions with other new nurses were not significant. The proportion of variance in the level of stress response of newly graduated nurses that can be explained by knowing the information on the three factors (trait anxiety, inservice programs, and supervisory feedback) was significant ($R^2 = .735$). Therefore, utilizing the score on the Trait Anxiety Inventory and the answers to the job characteristic questions on inservice programs and supervisor feedback, 73.8% of the variation in the level of stress response of the newly graduated nurse can be predicted. Hypothesis 2 was rejected.

An additional multiple regression analysis was performed using the level of stress response of the newly graduated nurse as the dependent variable with the independent variables of trait anxiety and all of the selected factors on the Chovanec Occupational Factors Questionnaire, the demographic data and the job characteristics. The results were uneventful, as the significant factors were the same as in the previous analysis.

Summary of Findings

This chapter has reported the analysis of the research data. First, the descriptors of the sample group of newly graduated nurses were presented. The sample consisted of 72 newly graduated nurses, with a mean age of 25.31 years. Of these nurses, 61% had graduated from a baccalaureate degree program. The length of employment in their current position ranged from 1 to 5 months. Of the sample of nurses, only 11 (15.3%) had never worked as a nursing aide or Licensed Vocational Nurse. Fifty-one percent of these nurses had delivered patient care in some capacity at the hospital in which they were currently employed. Fifty-eight (80.5%) of the newly graduated nurses were assigned to patient care units on which there were other newly graduated nurses.

The sample consisting of newly graduated nurses was also described according to their perceptions of the frequency of occurrence of selected job characteristics. The response to the question on honoring of requests was favorable with the majority of responses centered around "usually." The range of responses on the frequency of serving as charge nurse ranged from

never (1) to always (5) with the mean of 2.1. Working on other patient care units was found to be a fairly infrequent occurrence. The responses to the frequency of being assigned to a "buddy" or "preceptor" were centered around "rarely." The response of having to stay late occurred slightly more often than the mean of 2.7, between "rarely" and "sometimes." The mean frequency of scheduled inservice programs was above the rate of "sometimes." Planned discussions with other new nurses occurred less than rarely. Feedback from supervisors had a frequency of occurrence between "sometimes" and "usually,"

The scores of the newly graduated nurses on the Trait Anxiety Inventory ranged from 23 to 61 with 70.8% of the scores in a middle range of 28 to 46. Scores on the Psychological Distress Scale ranged from 0 to 19. Six of the sample population had scores greater than twice the mean, indicating high levels of psychological distress.

Hypothesis 1 stated that there would be no significant relationship between trait anxiety and the level of stress response of newly graduated nurses. This hypothesis was rejected at the significance level of

.05. Data analysis revealed that 72.5% of the variation in the stress level can be explained by knowing the score on the Trait Anxiety Inventory.

Hypothesis 2 stated that there would be no significant relationship between the level of stress response of newly graduated nurses and the variables of trait anxiety and selected occupational factors. This hypothesis was rejected. Utilizing the trait anxiety scores and the answers on frequency of occurrence of inservice programs and supervisory feedback, 73.8% of the variation in the level of stress response can be predicted.

CHAPTER 5

SUMMARY OF THE STUDY

A descriptive correlational study was conducted to examine the relationships among the variables of trait anxiety, selected occupational factors, and the level of stress response of newly graduated nurses. This chapter presents the methodology utilized for this study and a discussion of the findings relevant to the future and to previous research on these variables. Recommendations are suggested for additional research in the area of occupational stress and the newly graduated nurse.

Summary

The first job for the newly graduated nurse is an opportunity, as well as a challenge, to prove oneself in the field of nursing. Occupational stress in this first job may affect the perceptions, actions, and health of the newly graduated nurse, thus, resulting in a decrease in the quality of patient care provided by the nurse. This study was undertaken in an effort to examine factors within the possible control of the

employing institution that may be related to the stress response of the newly graduated nurse.

The population for this study was all newly graduated nurses at three designated hospitals in a large metropolitan city located in the Southwest. For the purpose of this study, the population served as the sample. Approval for this study was obtained from the Human Subjects Review Committee, the graduate school at Texas Woman's University, and each of the three participating hospitals. A packet containing the data collection instruments and a letter of explanation and instructions concerning the research study were distributed by each of the hospitals to the newly graduated nurses. The subjects were informed in the letter and on each questionnaire that return of the questionnaires in the self-addressed stamped envelope would be construed as informed consent to participate in the study.

Three instruments were used for data collection: the Chovanec Occupational Factors Questionnaire, the Trait Anxiety Inventory, and the Psychological Distress Scale. The Chovanec Occupational Factors Questionnaire, developed by the researcher, elicited information on eight demographic items and eight specific job

characteristics. The job characteristics selected were developed from a review of the literature. The Trait Anxiety Inventory, developed by Spielberger et al. (1970), consisted of 20 questions that asked the subjects to rate how they generally felt. The Psychological Distress Scale, developed by McLachlan (1977), was a state measure of stress. Responses to these 33 true-false statements are expected to change as different levels of stress are experienced by the individual.

The hypotheses tested in this nursing research study were:

1. There is no significant relationship between trait anxiety of newly graduated nurses, as measured by the Trait Anxiety Inventory, and their level of stress response, as measured by the Psychological Distress Scale.
2. There is no significant relationship between the level of stress response of newly graduated nurses and the variables of trait anxiety and selected occupational factors, as measured by the Chovanec Occupational Factors Questionnaire.

Discussion of Findings

This nursing research study examined several relationships through statistical analyses of the data collected on multiple variables. The level of stress response of the newly graduated nurse was the dependent variable. The independent variables included trait anxiety and selected occupational factors, including both the demographic items and the specific job characteristics. The findings of this study are discussed according to the hypotheses.

Hypothesis 1

The analysis of the data related to Hypothesis 1 indicated a strong relationship between trait anxiety and the level of stress response of the newly graduated nurse. Therefore, Hypothesis 1 was rejected. The analysis revealed that 72.5% of the variation in the level of stress response of the newly graduated nurse can be explained by knowing the score on the Trait Anxiety Inventory.

The result of this analysis supported previous findings reported in the literature. McLachlan (1977) found that the Psychological Distress Scale correlated with state anxiety scored from an adjective checklist,

as well as items connected with anxiety on the Minnesota Multiphasic Personality Inventory. Selye (1976) claimed that anxiety was the subjective warning sign of stress. Thus, the level of stress response determined by the score on the Psychological Distress Scale may be considered analogous to a level of state anxiety. Spielberger et al. (1970) found a strong correlation between the scores on the Trait Anxiety Inventory and the State Anxiety Inventory. Correlations between the scales varied between .44 and .55 for females, and .51 and .67 for males. In general, larger correlations were obtained between the scales under conditions that posed some threat to self-esteem or under circumstances when personal adequacy was being evaluated, than when measurements were obtained from threats of physical danger.

Hypothesis 2

The results of the analysis of the data related to Hypothesis 2 indicated that the three factors of trait anxiety, frequency of scheduled inservice programs, and feedback from supervisors were significant predictors of the level of stress response of newly graduated nurses. Thus, Hypothesis 2 was rejected. The analysis

revealed that 73.8% of the variation in the level of stress response can be predicted from the compiled data related to these three factors.

The support of the findings related to trait anxiety was discussed in relation to Hypothesis 1. Therefore, this section will address the other two factors, frequency of scheduled inservice programs aimed at increasing the competence in providing good patient care and the frequency of feedback from nursing supervisors.

Competency in one's work role was found to be a major concern in several other research studies. In the Kahn et al. (1964) study, it was found that greater role ambiguity, the discrepancy between the amount of information a person has and the amount required to adequately perform his role, resulted in high job-related tension. In several nursing studies, it was found that the nurses must have a thorough knowledge about the disease process, an understanding of the technical skills required, and enough knowledge about the patient to make sound clinical judgments (Meisenhelder, 1981; Schmalenberg & Kramer, 1979; Vreeland & Ellis, 1969). Offering inservice programs

to the newly graduated nurse was one suggested way to assist in gaining the necessary knowledge to insure competent patient care.

The frequency of feedback from nursing supervisors as an important factor influencing the stress response of newly graduated nurses is also supported in the literature. Feedback is necessary for the individual nurse to evaluate personal perceptions and actions on the job. Input as to how well expectations are being met is required if improvement is expected. (Meisenhelder, 1981; Schmalenberg & Kramer, 1979).

The other factors analyzed did not reveal any significant relationship to the level of stress response of the newly graduated nurse. Conclusions based upon these findings must be considered in view of the design of the study and the response rate of 52.9% to the survey.

Conclusions and Implications

The findings of the present research study supported the conclusion that trait anxiety, the frequency of scheduled inservice programs, and the frequency of feedback from nursing supervisors are related to the level of stress response of newly graduated nurses. Trait

anxiety was the most significant predictor for the level of stress response. Although the limitations of this study decrease the ability to generalize the findings, there are several implications for nursing practice that can be derived from the results of this study.

Implications for nursing practice in relation to trait anxiety scores would include a method to help predict the level of stress response the newly graduated nurse may experience. This information about the newly graduated nurse could be useful to nursing supervisors in considering initial job placement (e.g., general duty versus intensive care nursing), identifying the need for greater support and counseling, and selecting types and frequency of reinforcements for sound clinical actions. Hopefully, being aware of the level of trait anxiety of newly graduated nurses, may help nursing supervisors and staff help these individuals channel these energies into a constructive outlet.

Frequency of scheduled inservice programs was found to be another useful predictor of the level of stress response of the newly graduated nurse. In the

sample population, the frequency of occurrence was centered around the response "sometimes." Implications for nursing practice in this case, are aimed at nursing education. A need for the feeling of competency is great among newly graduated nurses. Therefore, efforts must be made to provide educational guidance for insuring the provision of competent patient care. Programs need to be directed at increasing the overall knowledge base of the nurse, as well as increasing technical skills. The newly graduated nurse needs guidance in making sound clinical judgments, but must have a strong knowledge base to support the decision-making process.

Feedback from nursing supervisors was also a significant factor in predicting the level of stress response of newly graduated nurses. This study revealed that the sample received supervisory feedback on the average of "sometimes." Indications for nursing practice in regard to this aspect include the need to look at current means and times of giving feedback to new employees. An effort may need to be made to increase the frequency as well as the manner in which feedback is now being given to the newly graduated nurses.

Recommendations for Further
Study

Based on the findings of this nursing research study, the following recommendations are offered:

1. Replication of the study using the same methodology with a larger sample of newly graduated nurses from a variety of hospitals and employing methods of randomization in the selection of participants.
2. Identification of occupational factors that are perceived as stressful by newly graduated nurses.
3. Further study of specific job characteristics and their relationship to the level of stress response of newly graduated nurses.
4. Comparison of stress levels of newly graduated nurses participating in various hospital organized programs as internships, bicultural training, and a standard orientation program.

APPENDIX A

TEXAS WOMAN'S UNIVERSITY
 Box 23717, TWU Station
 Denton, Texas 76204

1810 Inwood Road
 Dallas Inwood Campus

HUMAN SUBJECTS REVIEW COMMITTEE

Name of Investigator: Judith Chovanec Center: Dallas

Address: 13434 Glenside Drive Date: 8/4/81

Farmers Branch, Texas 75234

Dear Ms. Chovanec:

Your study entitled Occupational Stress and Newly Graduated Nurse

has been reviewed by a committee of the Human Subjects Review Committee and it appears to meet our requirements in regard to protection of the individual's rights.

Please be reminded that both the University and the Department of Health, Education, and Welfare regulations typically require that signatures indicating informed consent be obtained from all human subjects in your studies. These are to be filed with the Human Subjects Review Committee. Any exception to this requirement is noted below. Furthermore, according to DHEW regulations, another review by the Committee is required if your project changes.

Any special provisions pertaining to your study are noted below:

Add to informed consent form: No medical service or compensation is provided to subjects by the University as a result of injury from participation in research.

X Add to informed consent form: I UNDERSTAND THAT THE RETURN OF MY QUESTIONNAIRE CONSTITUTES MY INFORMED CONSENT TO ACT AS A SUBJECT IN THIS RESEARCH.

The filing of signatures of subjects with the Human Subjects
Review Committee is not required.

 Other:

 No special provisions apply.

Sincerely,

Estelle D. Kurtz
Chairman, Human Subjects
Review Committee

at Dallas

PK/sml/3/7/80

APPENDIX B



P.O. Box 22479, Denton, Texas 76204 (817) 383-2302, Metro 434-1757, Tex-An 833-2133

THE GRADUATE SCHOOL

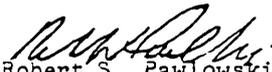
October 6, 1981

Miss Judith Anne Chovanec
13434 Glenside Drive
Farmers Branch, Texas 75234

Dear Miss Chovanec:

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

Sincerely yours,


Robert S. Pawlowski
Provost

RP:dl

cc Ms. Susan Goad
Dr. Anne Gudmundsen
Graduate Office

APPENDIX C

TEXAS WOMAN'S UNIVERSITY
COLLEGE OF NURSING

AGENCY PERMISSION FOR CONDUCTING STUDY*

THE Parkland Memorial Hospital

GRANTS TO Judith Chovanec

a student enrolled in a program of nursing leading to a Master's Degree at Texas Woman's University, the privilege of its facilities in order to study the following problem.

Occupational stress and the newly graduated nurse

The conditions mutually agreed upon are as follows:

1. The agency (may) (~~may not~~) be identified in the final report.
2. The names of consultative or administrative personnel in the agency (may) (~~may not~~) be identified in the final report.
3. The agency (wants) (~~does not want~~) a conference with the student when the report is completed.
4. The agency is (willing) (~~unwilling~~) to allow the completed report to be circulated through interlibrary loan.
5. Other _____

Date: _____

Elizabeth L. Good, R.N.
Signature of Agency Personnel

Judith Chovanec
Signature of Student

Susan Good
Signature of Faculty Advisor

*Fill out & sign three copies to be distributed as follows:
Original - Student; First copy - Agency; Second copy - TWU College of Nursing.

TEXAS WOMAN'S UNIVERSITY
COLLEGE OF NURSING

AGENCY PERMISSION FOR CONDUCTING STUDY*

THE _____

GRANTS TO Judith Chovanec

a student enrolled in a program of nursing leading to a Master's Degree at Texas Woman's University, the privilege of its facilities in order to study the following problem.

Occupational stress and the newly graduated nurse

The conditions mutually agreed upon are as follows:

1. The agency (~~may~~) (may not) be identified in the final report.
2. The names of consultative or administrative personnel in the agency (~~may~~) (may not) be identified in the final report.
3. The agency (wants) (~~does not want~~) a conference with the student when the report is completed.
4. The agency is (willing) (~~unwilling~~) to allow the completed report to be circulated through interlibrary loan.
5. Other _____

Date: 9/8/81

Judith Chovanec
Signature of Student

Signature of Agency Personnel

Susan Goad
Signature of Faculty Advisor

*Fill out & sign three copies to be distributed as follows:
Original - Student; First copy - Agency; Second copy - TWU
College of Nursing.

TEXAS WOMAN'S UNIVERSITY
COLLEGE OF NURSING

AGENCY PERMISSION FOR CONDUCTING STUDY*

THE _____

GRANTS TO Judith Chovanec
a student enrolled in a program of nursing leading to a
Master's Degree at Texas Woman's University, the privilege
of its facilities in order to study the following problem.

Occupational stress and the newly graduated nurse

The conditions mutually agreed upon are as follows:

1. The agency (may) (may not) be identified in the final report.
2. The names of consultative or administrative personnel in the agency (may) (may not) be identified in the final report.
3. The agency (wants) (does not want) a conference with the student when the report is completed.
4. The agency is (willing) (unwilling) to allow the completed report to be circulated through interlibrary loan.
5. Other The agency wants the researcher to present the results in a seminar on completion of the report.

Date: 9/14/81

Judith Chovanec
Signature of Student

Signature of Agency Personnel

Susan Good
Signature of Faculty Advisor

*Fill out & sign three copies to be distributed as follows:
Original - Student; First copy - Agency; Second copy - TWU
College of Nursing.

APPENDIX D

Dear New Graduate:

The purpose of this letter is to ask you to participate in a nursing research study that is examining specific personal and occupational factors and their relationship to the level of stress of newly graduated nurses. This study is being conducted as a thesis requirement for my Master's degree at Texas Woman's University.

All new graduates at this hospital are being asked to participate in this research study. In order to keep the background of each participant similar, please complete the enclosed questionnaires only if you have completed your basic nursing educational program in the past 6 months and have not worked previously as a Registered Nurse or a Registered Nurse Applicant. If you do not meet the criteria for completion of the questionnaires, thank you for your time and consideration. You may return the blank questionnaires in the attached envelope.

If you meet the criteria for participation in this study, there are three questionnaires included in this packet that I would like for you to complete. The

first, the Chovanec Occupational Factors Questionnaire, elicits data concerning general information about you and specific characteristics of your job. The second, the Self-Evaluation Questionnaire, asks you to rate how you generally feel. The third, the Psychological Distress Scale, contains statements that may describe your present feelings about yourself. In order to keep a similar frame of mind and environment for all participants, please complete the three questionnaires at home within 2 hours following the completion of a shift of work. It should only take you about 20 minutes to complete the questionnaires. These are not tests and there are no right or wrong answers.

The results of this study may benefit nursing staff and administrators by revealing specific personal and occupational factors that are related to the stress response of newly graduated nurses. One possible risk is that participation could increase your awareness of your level of stress response.

This study has been approved by your hospital administration. Participation in this study is voluntary and will not affect your employment status or performance evaluation. You will not need to sign anything.

Return of the questionnaires in the attached self-addressed envelope will be construed as informed consent to use the data. Your identity will remain anonymous. All questionnaires are confidential and will be destroyed following the completion of the study. No medical service or compensation will be provided to subjects by Texas Woman's University as a result of participation in this study.

Thank you so much for your time and cooperation. If you have any questions about the study or the questionnaires, please call me at 620-1359. Please complete the questionnaires and return them to me by Oct. 16th. All new graduates will receive a follow-up letter in 2 weeks, if the response rate is low, to encourage completion and return of the questionnaires. The results of the entire study will be available to you through your Nursing Continuing Education Department.

Sincerely,

Judith Chovanec

APPENDIX E

CHOVANEC OCCUPATIONAL FACTORS QUESTIONNAIRE

Directions: Please complete the following questions with an X in the appropriate blank or a short written answer.

I UNDERSTAND THAT RETURN OF THIS QUESTIONNAIRE CONSTITUTES MY INFORMED CONSENT TO ACT AS A SUBJECT IN THIS RESEARCH

Demographic Data:

1. Age in years _____
2. Level of nursing education completed
 - _____ 2 year Associate Degree
 - _____ 3 year Diploma
 - _____ 4 or 5 year Baccalaureate Degree
 - _____ Other: please specify _____
3. Date of graduation from nursing education program

4. Have you taken or applied for the State Board Examination for licensure as a Registered Nurse?
yes _____ no _____
5. Date of employment as a newly graduated nurse

6. Have you worked in the past as a:
 - a. nursing aide yes _____ no _____
 - b. LVN yes _____ no _____
7. Did you provide patient care in the hospital that you are currently employed as a:
 - a. nursing student yes _____ no _____
 - b. nursing aide yes _____ no _____
 - c. LVN yes _____ no _____
 - d. Other yes _____ no _____ : if yes, please specify _____
8. Are there other newly graduated nurses on your patient care unit?
yes _____ no _____

Job Characteristics:

The purpose of this section is to indicate the frequency of occurrence of situations in your job. Please circle 1 if it never occurs; 2 if it rarely occurs; 3 if it occurs sometimes; 4 if it occurs usually; and 5 if it always occurs.

	NEVER	RARELY	SOMETIMES	USUALLY	ALWAYS
9. My requests are honored by nursing administration (unit assignment, shift rotation, time-off requests).	1	2	3	4	5
10. I serve as team leader or as charge of the unit.	1	2	3	4	5
11. I work on other patient care units than the one to which I am assigned.	1	2	3	4	5
12. I am assigned to work with someone special, such as a "buddy" or a "preceptor".	1	2	3	4	5
13. I have to stay late to complete assigned work.	1	2	3	4	5
14. There are scheduled inservice programs to help me increase my competence in providing good patient care.	1	2	3	4	5
15. There are planned discussions with other new nurses to answer questions and ventilate feelings.	1	2	3	4	5
16. I receive feedback from my supervisor or head nurse on my performance.	1	2	3	4	5

APPENDIX F

Acknowledgements to the Copyright Holders
of the Trait Anxiety Inventory

The Trait Anxiety Inventory (STAI Form X-2) was developed by Spielberger et al. The form was copyrighted in 1968 by Charles Spielberger. The STAI Manual and copies of the Trait Anxiety Inventory can be obtained from:

Consulting Psychologists Press
577 College Avenue
Palo Alto, California 94306

APPENDIX G



Judith Chovanec
13434 Glenside Dr.
Dallas, Texas 75234

February 27, 1981

Dear Ms Chovanec,

The Psychological Distress Scale is scored from the Minnesota Multiphasic Personality Inventory (MMPI) and full scoring information is provided in the accompanying article.

The first sentence on page 106 indicates the items used and their scoring direction. One point is assigned for the items identified as true which the respondent marks as "true", and one point is assigned for the items identified as false which the respondent marks as "false". This results in a scale from 0 to 33 with higher scores representing greater degrees of psychological distress.

I have no objection to you using the scale in your thesis study. However, I do not hold the copyright to the items used. One way to deal with this problem is to purchase MMPI questionnaires from the Psychological Corporation in New York or from a local supplier in Dallas. Any psychologist in your town should be able to direct you to a source.

Some investigators appear to have administered the items by themselves, using instructions similar to those used in the MMPI. I cannot advise you, however, whether use of the items would still be subject to copyright violation as they would not represent the original MMPI test (which itself is partly a composite of other tests). I understand that some investigators have used MMPI items either orally or mimeographed for research purposes. In any event, to protect the MMPI you should not reproduce the items in your thesis or permit access to them by unauthorized individuals. Reference to the publication should be sufficient for thesis purposes.

I wish you success in your thesis and would be pleased to hear of your results.

Sincerely,

John McLachlan

John F. C. McLachlan, Ph.D
Director of Research

P.S. I am enclosing an article which used a different measure of anxiety (the IPAT) which you may also wish to investigate.

AGREEMENT

96

This AGREEMENT entered into as of JUNE 30, 1981
between The Psychological Corporation, a subsidiary of Harcourt Brace Jovanovich, Inc., 757 Third Avenue, New
York, N.Y. 10017 (hereinafter called "Publisher") and

Name: JUDITH CHOVANEC
13434 GLENSIDE DRIVE *gc 7/7/81*
Address: FARMERS BRANCH, TEXAS 75234

(hereinafter called "Licensee"), WITNESSETH:
WHEREAS the Publisher is the copyright owner/agent

MINNESOTA MULTIPHASIC PERSONALITY INVENTORY

(hereinafter called the "Work"); and

WHEREAS the Licensee wishes to reproduce the following parts of the Work specifically for the following purposes:
to reproduce 33 items from the Work for research purposes only.
(In up to 150 copies)

gc 7/7/81
h 7/21/81

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10. This Agreement shall only become effective if it is executed by the Licensee within thirty days of the effective date shown above.
11. This instrument constitutes the entire agreement between the parties and there are merged herein all prior and collateral understandings and agreements. No amendment or modification of this Agreement shall be valid unless in a writing signed by both parties.
12. Regardless of the place of its physical execution or performance this Agreement shall be governed by and interpreted under the laws of the State of New York.

Judith Chovance
 Licensee
P.N. - TWU Graduate Student
 Title
July 7, 1981
 Date

THE PSYCHOLOGICAL CORPORATION
 a subsidiary of Harcourt Brace Jovanovich, Inc.

James Newell
 Date
7/21/81

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