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Influence of professional nursing practice on nurse satisfaction and retention among active duty United States Air Force nurses

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INFLUENCE OF PROFESSIONAL NURSING PRACTICE ON NURSE SATISFACTION AND RETENTION AMONG ACTIVE DUTY UNITED STATES AIR FORCE NURSES

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TABLE OF CONTENTS

TABLE OF CONTENTS--*Continued*

LIST OF ILLUSTRATIONS

Figures Page

LIST OF TABLES

ABSTRACT

A causal modeling non-experimental design was used to test the influence of professional nursing practice (autonomy, control over nursing practice, group cohesion, and organizational commitment) on job satisfaction and anticipated turnover. A sample of 79 active duty Air Force nurses provided the convenience sample for the study.

The concepts of control over nursing practice and organizational commitment had a positive influence on job satisfaction. Job satisfaction and organizational commitment had a negative influence on anticipated turnover. Neither autonomy nor group cohesion influenced either job satisfaction or anticipated turnover. Higher level of control over nursing practice, stronger organizational commitment and decreased anticipated turnover were found with field grade officers in comparison with company grade officers.

INFLUENCE OF PROFESSIONAL NURSING PRACTICE ON NURSE SATISFACTION AND RETENTION AMONG ACTIVE DUTY UNITED STATES AIR FORCE NURSES

CHAPTER 1

INTRODUCTION

The United States Air Force Nurse Corps came into existence on 1 July 1949. Since 1949, the United States Air Force Nurse Corps has grown to become the largest professional corps in the Medical Service. This corps has an authorized strength of 4,862 nurses as of 1985 (Haritos, 1985). The highest priority for the military health care system is combat medical readiness (Chow, Nelson, Hope, Sokoloski, and Wilson, 1978; Finfgeld, 1991). The military health care system faces the same challenges found in the civilian health care system and a nursing shortage affects whether or not this priority will be met. One major challenge is the recruitment and retention of nursing personnel. The cost of recruiting and orienting nurses is significantly higher than the cost of retaining nurses (Jones, 1992; Kirsch, 1990).

Statement of the Problem

The problem to be addressed in this study is that of retention of nurses in the Air Force. This section will explain what has been done in civilian practice to retain nurses and how this relates to the military.

The demand for health care continues to increase each year despite efforts to contain health care costs. The impact of shorter lengths of patient stays, rise in the number of more acutely ill patients, and the Department of Defense reduction in forces is affecting the need for nursing personnel in all military hospitals. In the past, the nursing shortage in the military has been less than the civilian sector. Historically, recruiters have met annual recruiting goals in bringing into the Air Force the required number of nurses needed to complete the authorized quota set by Congress. However, in the specialty fields such as nurse anesthetists, nurse practitioners, and operating room nurses, recruiters have had a difficult time in meeting the required recruitment numbers (Major Koles, personal communication, August 11, 1992).

A proposed solution to the problem of recruiting and retaining nurses in hospital settings is restructuring and differentiating the way nurses deliver nursing care. Verran, Murdaugh, Gerber and Milton (1988), in their study of the Differentiated Group Professional Practice (DGPP) in Nursing model, proposed that increased satisfaction should increase nurse retention and decrease turnover. This, in turn, should increase quality of patient care outcomes and decrease or at least maintain fiscal resources.

The DGPP model, which was designed for use in civilian hospitals, has several components that may be relevant to

professional nursing practice among Air Force nurses. The areas of professional nursing practice and satisfaction have been adapted from this research model along with the issue of retention for use within this study.

Differentiated care delivery is comprised of three components: differentiated registered nurse (RN) practice, the use of nurse extenders, and primary case management (Milton, Verran, Murdaugh, & Gerber, 1992). Moritz (1991) points out that the recognition of the increasing need to differentiate nurses by their knowledge and clinical competence is the starting point for differentiated nursing practice.

Differentiated RN practice is designed so that nurses with varying levels of education and work experience can most efficiently use their skills and knowledge, while delegating non-nursing tasks to assistant personnel (Milton et al., 1992). This differentiated nursing practice distinguishes between the professional and technical nursing roles.

Primm (1987) describes differentiated practice for nurses with Associate Degree in Nursing (ADN) versus a Bachelor of Science in Nursing (BSN) degree. The ADN nurse's role is clinically different than the BSN nurse's role. An example of this difference is that the ADN degree nurse organizes for focal client those aspects of care for which she or he is responsible. The BSN nurse manages comprehensive nursing care for focal clients.

Manthey (1988) defines the nurse extender role as an individual working as a technical assistant to an experienced registered nurse. The defining characteristic of this role is that each technical assistant would work under the delegation of the registered nurse. The registered nurse is fully responsible for care planning decisions.

Milton et al. (1992) characterize primary case management as the framework for describing, monitoring, and tracking patient care and care outcomes during an episode of hospitalization. Del Togno-Armanasco, Olivias, and Harter (1989) define case management as a methodology for organizing patient care through an episode of illness so that specific clinical and financial outcomes are achieved within an allotted time frame.

Based upon the author's experience as an Air Force nurse, professional nursing practice in the United States Air Force is similar to civilian nursing practice. Military nursing has traditionally followed several of the guidelines for differentiated nursing practice. The military nursing personnel components consist of the nurse corps officer and the enlisted medical technician. The nurse corps officer is a registered nurse with the minimum education level of a Bachelor of Science in Nursing degree. Since the 1970s, the Air Force requirement for entrance into the military has been set at this minimal educational level. The medical technician provides an extension of the nursing role and

works under direct supervision of the nurse corps officer. The medical technician is a valuable member of the nursing team.

In order to perform its peacetime mission, the United States Air Force Nurse Corps is organized using the team approach. A team is made up of military officers, civilian professional nurses, enlisted and civilian paraprofessional nursing personnel. The military and civilian nurses are all registered nurses. The enlisted personnel, known as medical technicians, range from nursing assistants to licensed practical nurses, while the civilian paraprofessionals are usually licensed practical nurses.

The nursing team members are educated, trained, and supervised by a registered nurse. The practice environment is monitored and controlled in accordance with established regulatory guidelines as well as hospital specific standards of care and practice.

The training for the medical technician as a nurse extender is quite extensive. The medical technician progresses through five training levels. The medical technician through both hands-on training and written examination demonstrates clinical competency in their nurse extender role. The medical technician's role as a nurse extender is used extensively through out the Air Force medical system to help augment the shortage of registered nurses.

Currently, the United States Air Force is not practicing case management in the smaller base hospitals. Two of the three components of differentiated care delivery system is being used in the United States Air Force: differentiated registered nurse practice and use of the nurse extender. However, with the advent of the Diagnosis-Related Groups in the military, this author sees a strong possibility that military hospitals will be examining and initiating the third component of differentiated care delivery system, that is primary case management.

The rank structure for nurses is the same as other military officers. The company grade officer ranks are: second lieutenant, first lieutenant, and captain. The field grade officer ranks are: major, lieutenant colonel, colonel, and general. Initial rank for a new nurse entering the military is based on the number of years of nursing experience as well as the educational level.

The United States Air Force Nurse Corps grade structure and actual quota is set by Congress. The percentage breakdown by ranks is shown in Figure 1. Clearly the majority of nurses are in the company grade officer ranks, making up about 67% of all the nurses in the corps. The majority of nurses who enter the military come in as either a second or a first lieutenant. Promotion opportunities exist after two years as a second lieutenant to first lieutenant and then after another two years, the nurse is eligible for

Grade	Percentage of Authorization
Lieutenants	27%
Captains	40%
Majors	22%
Lieutenant Colonel	9%
Colonel	2%

Figure 1: Percentage of Authorized Grades for Air Force Nurse Corps Officers

Source: Air Force Regulation 36-23, Career Progression Guide, Chapter 49, p. 49-4, 16 April 1976.

captain. In most cases, by the time the nurse makes captain, the nurse has served the initial commitment to the service.

For field grade officers, the time interval between promotions widens. The usual number of years of active duty service from captain to major is around nine to eleven years, from major to lieutenant colonel is around 15 to 17 years. The promotion from lieutenant colonel to colonel is around 21 to 23 years of active duty service (Phase Points, 1993). All nurses meet a formal promotion board to determine if they will receive their next rank. The promotion board examines all past officer effectiveness reports, the promotion recommendation statement made by the hospital commander, the official photograph (the picture is used to see the proper wear of the military uniform), education level, completion of professional military education, and any awards and decorations received. Promotions to the next rank are not automatic. The higher the nurse moves up in the rank structure the less number of authorized slots in that rank are available.

Nursing positions in each of the United States Air Force base hospitals has historically been based on bed occupancy rates. The trend over the years has shown a decrease in the bed occupancy rate. Changes in the health care system such as ambulatory surgery, earlier recognition and treatment, reimbursement practices, and improved medical technology has played a key role in decreasing this rate. Subsequently, the

number of authorized nursing positions at base hospitals has decreased. The future for staffing military hospitals will be based on the Workload Management Systems for Nursing. This is a comprehensive patient acuity system with a primary purpose of driving staffing needs. Jennings and McClure (1991) stated that the Office of the Assistant Secretary of Defense is currently using this system to examine the link between patient acuity and nursing resource consumption.

Dramatic changes are occurring in the health care system. Restructuring of patient care delivery systems appears to be one solution to the ever growing nursing shortage (Barry & Gibbons, 1990). The United States Air Force Nurse Corps needs to examine how the nursing shortage will affect meeting the Air Force's mission. A crucial area to examine is the practice environment and the nursing care delivery systems that promote professional nursing practice.

Purpose of the Study

There were three purposes for conducting this study. The first purpose was to examine the influence of professional nursing practice on nurse satisfaction and retention among active duty United States Air Force nurse officers. The second purpose was to examine the relationships among autonomy, control over nursing practice, organizational commitment, group cohesion, work satisfaction, and anticipated turnover among active duty United States Air Force nurse officers. The third purpose was to examine the

differences and the similarities between company grade nurse officers and field grade nurse officers self-reports of professional nursing practice as indexed by autonomy, control over nursing practice, group cohesion, organizational commitment, job satisfaction, and anticipated turnover.

The three research questions were:

1. What is the influence of professional nursing practice on work satisfaction and retention among active duty United States Air Force nurse officers?

2. What are the bivariate relationships among autonomy, control over nursing practice, group cohesion, organizational commitment, work satisfaction, and anticipated turnover among active duty United States Air Force nurse officers?

3. What are the similarities and differences between mean scores of company grade nurse officers and field grade nurse officers with respect to each of the following: autonomy, control over nursing practice, group cohesion, organizational commitment, job satisfaction, and anticipated turnover?

Significance of the Study

The shortage of nurses is based on many factors: changes in the supply and demand for nurses, increases in patient acuity, increases in medical technology, changes in organizational and delivery of services, cost containment, and substitution among health care workers (Aiken & Mullinix, 1987; Enright, 1988; O'Malley & Llorente, 1990; Prescott,

1989; Prescott, Phillips, Ryan, & Thompson, 1991).

Frequently, when there is a nursing shortage there is a cry to produce more nurses as the solution to this problem. However, several authors (Prescott, 1989; Prescott et al, 1991) disagree with this solution and believe that the answer lies in altering the practice setting in ways that will enhance and improve professional nursing practice.

If the issue is the presence of professional nursing practice, then it is important to examine how nurses view the components of professional nursing practice (autonomy, control over nursing practice, group cohesion, and organizational commitment) in hospitals. If professional nursing practice influences both nurse satisfaction and retention as suggested by Hinshaw, Smeltzer, and Atwood (1987), then both recruitment and retention strategies can be tailored to fit the unique military nursing setting.

Summary

The problem addressed in this study was retention of nurses in the Air Force. The purpose of this study was to examine the influence of professional nursing practice on nurse satisfaction and retention. The research questions to be addressed were: (1) What is the influence of professional nursing practice on work satisfaction and retention among active duty United States Air Force nurses? (2) What are the relationships among autonomy, control over nursing practise, group cohesion, organizational commitment, work satisfaction

and anticipated turnover? and (3) What are the similarities and differences between company grade nurse officers and field grade nurse officers with respect to autonomy, control over nursing practice, group cohesion, organizational commitment, job satisfaction, and anticipated turnover?

This study is significant because the United States Air Force Nurse Corps faces the same challenges as their civilian counterparts in dealing with the nursing shortage. Understanding nurses' views of professional nursing practice in the United States Air Force Nurse Corps would generate a better understanding of what keeps a nurse in the military. Since differentiated nursing practice and nurse satisfaction have been suggested to influence nurse retention, the results from this study would be a useful for the United States Air Force Nurse Corps when making decisions about nursing recruitment and retention issues.

CHAPTER 2

CONCEPTUAL FRAMEWORK

The conceptual framework for this study was based on the theoretical model developed in the Differentiated Group Professional Practice in Nursing Model (Verran, Murdaugh, Gerber, & Milton, 1988) and the theoretical model from the study of anticipated turnover among nursing staff (Hinshaw & Atwood, 1986). Chapter Two consists of the review of the literature describing the components of the conceptual framework.

Conceptual Framework

The conceptual framework (Figure 2) contains three levels: the construct, the concept, and the operational level. The construct level describes the relationship between professional nursing practice, nurse satisfaction, and retention. Professional nursing practice is indexed by four concepts: autonomy, control over nursing practice, group cohesion, and organizational commitment. Nurse satisfaction is indexed by the concept of job satisfaction. Job satisfaction has seven subcomponents: pay, professional status, interaction with nurses, interaction with physicians, task requirements, organizational policies, and autonomy. Retention is indexed by the concept of anticipated turnover. Each of these constructs and concepts and their proposed relationships will be discussed in relation to the practice of nursing in the United States Air Force Nurse Corps.

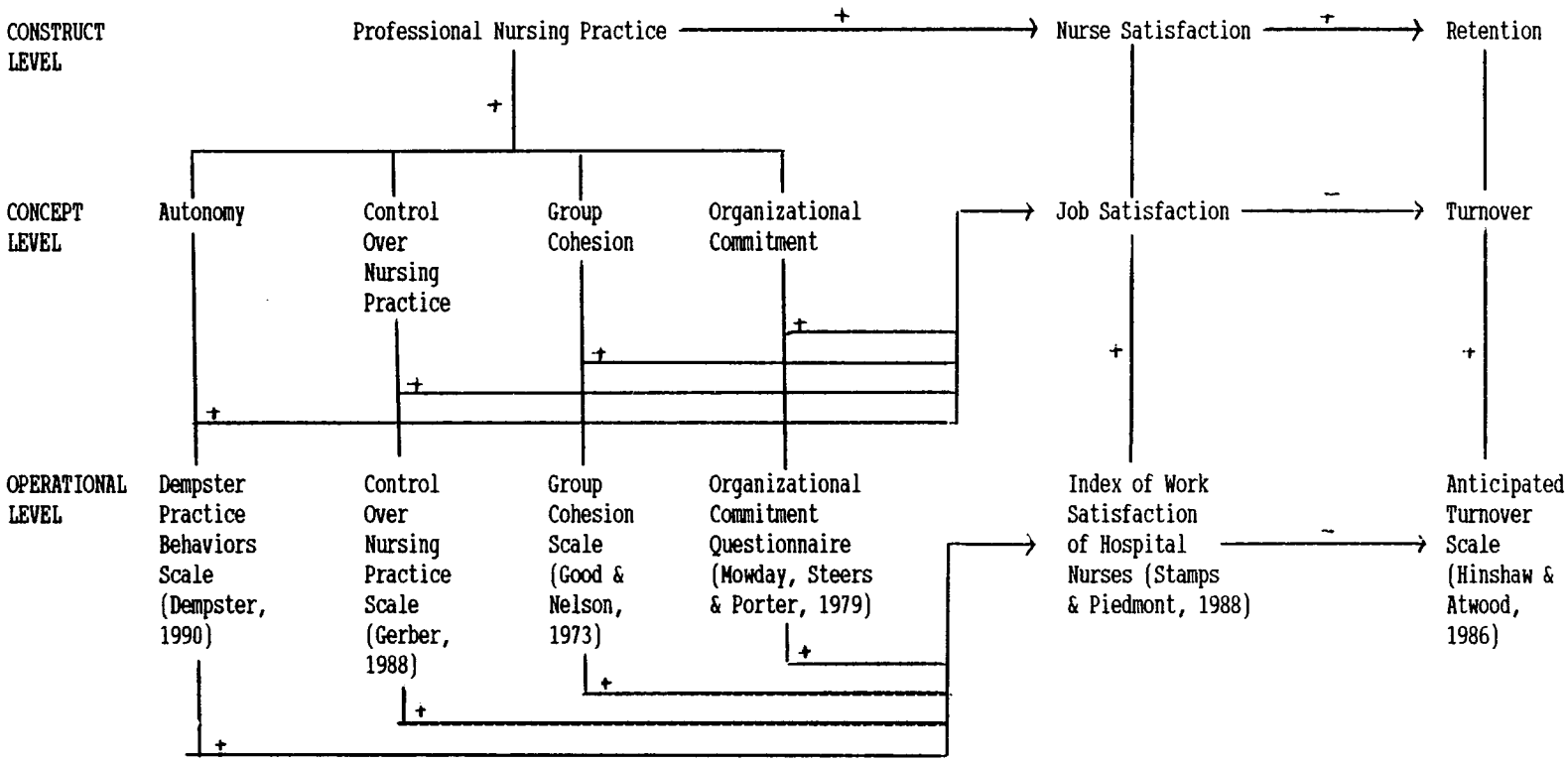


Figure 2: Conceptual Framework: Influence of Professional Nursing Practice on Nurse Satisfaction and Retention

Model Construct Level

Professional Nursing Practice

Professional nursing practice was the first construct within the more abstract level of the conceptual framework. Many authors have stated in the literature that increasing the number of nurses will not solve the nursing shortage (Prescott, 1989; Prescott, Phillips, Ryan, & Thompson, 1991). The answer clearly lies in how nursing personnel is used. Use of nurses in the hospital has been based on the assumption that nurses are interchangeable and therefore replaceable rather than an important professional resource with specialized knowledge (Prescott, 1989).

Professional nursing practice was defined as having the following components: decentralized decision making (Dwyer, Schwartz, & Fox, 1992), increasing amounts of autonomy (Maas & Jacox, 1977) and control over nursing practice (Porter-O'Grady, 1990). Decentralized decision making is described as a dynamic participative philosophy of organizational management that involves selective delegation of authority to the operational level while maintaining managerial control through equally selective policies, procedures, and reporting mechanisms (Przestrzelski, 1987). A commitment is required at the highest levels to develop nursing executives at the unit level who coordinate patient care delivery at the unit level while still integrating that unit's activities with all others in the organization.

Manthey (1989) points out that professional nursing practice requires decentralized decision making. This decision making consists of three key components: responsibility, authority, and accountability. Responsibility refers to both the allocation and the acceptance of responsibility for a particular function. Authority refers to fulfilling the functions for which the nurse has responsibility. And accountability refers to the retrospective analysis of actions that were taken or plans that were made to determine whether or not they were appropriate for the situation.

Maas and Jacox (1977) state that "many nurses assert that quality nursing services cannot be provided until nurses achieve a professional model of practice; that is, the definition and control of nursing practice by professional nurses" (p. 7). They further point out that acceptance of the professional model requires the nurse to be able to use his or her knowledge to promote the patient's welfare and accept responsibility for the result of his or her judgement. This accountability and control over nursing practice is crucial for professional nursing practice.

The changes necessary to promote professional nursing practice will require the realignment of administrative structure and function and the implementation of a nursing system designed to empower nurses. The only way to ensure nurses' autonomous decision making control over a patient's

nursing care is to reduce authoritarianism and replace it with true decentralization (Manthey, 1989).

In looking at where Air Force nurses are in comparison to their civilian counterparts, numerous factors may play key roles in looking at the components of professional nursing practice. Factors such as the nursing administration structure and philosophy set by the Chief Nurse will effect whether or not decisions are decentralized. The level of autonomy and control over nursing practice may also be affected by senior management personnel as well as any Air Force rules and regulations. To some extent, by virtue of being an officer in the Air Force there is an expected degree of autonomy based on rank. The officer is expected to be the leader. Control over nursing practice may also be influenced by the nurse officer's rank and position.

Nurse Satisfaction

Nurse satisfaction was the second construct within the conceptual framework. Nurse satisfaction was defined as the degree to which nurses like or enjoy their jobs (McCloskey & McCain, 1987).

Mottaz (1988) investigated the nature and sources of work satisfaction among registered nurses. Data from 312 nurses and 1,303 other workers representing a variety of occupations were analyzed. The research suggested that the intrinsic rewards of task autonomy, nature of supervision, and salary were major determinants of work satisfaction.

This study also found that relatively low levels of work satisfaction among nurses correlated with low levels of task autonomy, supervisory assistance, salary, and some lack of task involvement.

Simpson (1985) examined job satisfaction and dissatisfaction reported by nurses (n = 497) in the nursing hierarchy in five acute care hospitals. Nurses at all levels of the nursing hierarchy reported dissatisfaction with their work and their work environment. Simpson's recommendation is that a nursing department should take into consideration the motivating factors that enhance or provide nurse satisfaction. Simpson (1985) identified the motivating factors as: achievement, recognition, work itself, responsibility, and advancement. This consideration would also contribute to the development of an autonomous nursing profession in which nurses would be delegated appropriate authority and be held accountable at all levels.

Herzberg, Mausner, and Synderman (1967) explained Herzberg's theory of motivation. Herzberg's research indicated a two factor explanation for motivation. In one group of needs are such things as company policy and administration, supervision, working conditions, inter-personal relationships, salary, status, job security, and personal life. Herzberg identified these as dissatisfiers and not motivators. Their existence does not motivate in the sense of yielding satisfaction, but their lack of existence

would result in dissatisfaction.

In the second group of needs, Herzberg et al (1967) listed certain satisfiers which he identified as motivators, which are related to job content. These motivators are such factors as achievement, recognition, challenging work, job growth, and advancement. Their existence will yield feelings of satisfaction or no satisfaction, but not dissatisfaction.

There has been considerable research done on job satisfaction with civilian nurses, but few research studies were found in the literature that measured satisfaction of military nurses. Findings from the research studies done on civilian nurses having to do with satisfaction may not be relevant or applicable to military nurses.

Retention

Retention was the third construct within the conceptual framework. Retention was defined as the state of keeping nurses in an organization. For purposes of this study, organization will refer to the United States Air Force. Turnover is a chronic problem in the nursing labor force. Numerous research studies in the literature has looked at nursing retention (Hinshaw et al., 1987; Kirsch, 1990; Prescott & Bowen, 1987; Whaley, Young, Adams, & Biordi, 1989). For the purpose of this study, turnover will be defined as the voluntary act of leaving the organization.

Bluedorn (1979) looked at a causal model of turnover for military organizations. The model included structural

variables (organizational control and pay), environmental variables (push or pull), and social psychological variable (job satisfaction) among 6,156 United States Army officers. Bluedorn (1979) points out that since the military's stratification system exerts a greater influence over the total life activities of military members, it impacts on organizational control more so than in the civilian setting. In the military, it is often difficult to increase a military member's control without decreasing the control of someone above or below that member.

Price and Mueller (1981) examined a causal model of turnover for nurses. Longitudinal data on 1,091 nurses from seven civilian hospitals were used to estimate a causal model of turnover in organizations. Price and Mueller looked at eleven variables and how these variables related to job satisfaction, which related to intent to stay and then to turnover. The variables studied were: opportunity, routinization, participation, instrumental communication, integration, pay, distributive justice, promotional opportunity, professionalism, generalized training, and kinship responsibility.

Price and Mueller's (1981) findings were mixed. Intent to stay, a dimension of commitment, was found to have the largest total impact on turnover. Opportunity was the second most important variable. Job satisfaction was found to have no significant net influence on turnover. However, Price and

Mueller point out that job satisfaction served as an important mediating variable between the other variables and turnover. These authors' final recommendation was that intent to stay should be changed to commitment and be defined using Mowday, Steers, and Porter's definition of organizational commitment. No research was found in the literature that examined retention among military nurses.

Model Concept Level

Autonomy

Autonomy was one of the four indices of professional nursing practice as defined by the Differentiated Group Professional Practice in Nursing Model (Milton et al., 1992; Verran et al., 1988). Others in the literature identify autonomy as a vital component of professional nursing practice (Dwyer et al., 1992; Maas & Jacox, 1977).

Therefore, autonomy was the first concept within the conceptual framework. Autonomy is defined as the perceived independence that an individual has in the performing of his or her job (Milton et al., 1992; Verran et al., 1988). Autonomy surfaced as a factor in nurse retention because the lack of autonomy resulted in decreased job satisfaction (Alexander, Weisman, & Chase, 1982). More autonomy is increasingly advocated as a way to better retain nurses (Edwards, 1988: McCloskey, 1990).

Edwards (1988) points out that increasing staff nurse autonomy is an important step which requires both the unit

manager and the staff nurse to play crucial roles. Staff nurse autonomy occurs when decentralized management structures, participative management, and shared governance is applied.

Maas and Jacox (1977) define autonomy as "the condition of self-determination and direction without outside control" (p. 7). They further delineate professional autonomy as members of an occupation govern and control their own activities. Co-existent with autonomy is accountability. Accountability means responsibility and answerability to authority for one's actions. Maas and Jacox go on and describe the precursors for autonomy and accountability as including: direct access to clients; decentralization of the nursing hierarchy, with decision-making taking place at the professional-client level; the authority to apply knowledge for client's benefit and be answerable to peers for evaluation of practice; and nurses' awareness of the need to function as a group to accomplish their purpose.

Dwyer et al. (1992) describe autonomy in terms of the work place, as one condition that helps employee's motivation and job satisfaction. Dwyer et al. (1992) looked at 151 full time registered nurses employed in a medium sized, private hospital to see the preference for decision making autonomy. The variables used were clinical ladder, perceived control, preference for decision making autonomy, and facet satisfaction. Their results found that nurses who see their

jobs as having more opportunities for autonomy were more satisfied with their jobs and the work they did. Their study also found that nurses are generally more satisfied as they move up a clinical ladder. Additionally, nurses who prefer to decide aspects of management on their nursing unit showed an increase in job satisfaction.

McCloskey (1990) looked at autonomy (control over work activities) and social integration (relationship with co-workers) on job satisfaction. A series of questionnaires were given to 320 nurses at different time periods (at six months and at twelve months). The study results showed that both autonomy and social integration are important concepts for nurses. McCloskey (1990) stated that "when nurses have both autonomy and social integration, they are more satisfied, are more commited to the organization, have more work satisfaction and are more intent to remain on the job" (p. 143).

Alexander et al. (1982) analyzed selected characteristics of hospital nursing units to identify those features of the work setting that influence staff nurses' perception of autonomy. Data was collected on 789 registered nurses. This study found that nurses' perception of autonomy were influenced by both personal attributes and by structural features on the nursing unit. Alexander et al. (1982) stated that "increasing the amount of control nurses have over their work is a logical first step in promoting nurses' job

satisfaction, reducing their turnover, and in promoting the professionalism of nursing" (p. 52).

Schutzenhofer (1988) identified changes in the work environment which are directed at increasing the professional autonomy of nurses. These changes are restructuring work settings, staffing, implementation of new patient care delivery methods and implementation of theory-based nursing practice. Only through autonomy will the profession of nursing realize its future (Kerfoot, 1989).

Control Over Nursing Practice

Control over nursing practice was the second index of professional nursing practice identified in the Differentiated Group Professional Practice in Nursing model (Milton et al., 1992; Verran et al., 1988). Increasing control over nursing practice has been one method advocated for improving professional nursing practice (McCloskey, 1990).

Therefore, control over nursing practice was the second concept within the conceptual framework. Gerber (1988) defined control over nursing practice as "one's perceived freedom to evaluate and modify nursing practices, to make autonomous decisions related to patient care, and to influence the work environment and staffing at the unit level of organization."

Hinshaw and Atwood (1986) tested 1,597 nurses on whether control over nursing practice had a positive effect on job

satisfaction. Control over nursing practice was found to be viewed by these staff nurses as a major satisfier and influenced organizational job satisfaction, job stress, and group cohesion.

Manthey (1989) believes that hospitals tend toward authoritarian control over nursing practice. However, authoritarian control is incompatible with professional autonomy or control over nursing practice. Manthey (1989) also stresses that the empowerment of the nursing staff is critical to the practice of professional nursing. Manthey (1989) states that "the lack of acceptance of authority on nurses' part permits perpetuation of illegitimate control by others and thwarts the empowerment process" (p. 15).

No research was found that looked at control over nursing practice issues with Air Force nurses. As with autonomy, the nurse's rank may play a part in the amount of control over nursing practice. With higher rank, the perception may be that there is more control over nursing practice.

Group Cohesion

Group cohesion was the third index of professional nursing practice as defined within the Differentiated Group Professional Practice in Nursing model (Milton et al., 1992; Verran et al., 1988). Strong group cohesion has been suggested to improve nurses' job satisfaction (McCloskey, 1990). Group cohesion has also been suggested to influence

both job satisfaction and anticipated turnover (Hinshaw et al., 1987). Therefore, group cohesion is the third concept within the conceptual framework. Group cohesion is defined as the results of all forces influencing an individual to remain a member of a group (Good & Nelson, 1973).

Cartwright (1968) described the nature of group cohesiveness in terms of determinants and consequences of group cohesiveness. Group cohesiveness is defined "as the resultant of all forces acting on members to remain in group; component forces arise from (a) attractiveness of group; (b) attractiveness of alternative memberships" (Cartwright, 1968, p. 92). The determinants of group cohesiveness are: (a) incentive priorities of the group, (b) motive base of members, (c) expectancy concerning outcomes, and (d) comparison level. The consequences of group cohesiveness are: (a) maintenance of membership, (b) power of group over members, (c) participation and loyalty, (d) personal security, and (e) self-evaluation.

Hinshaw et al. (1987) found that group cohesion positively influenced job satisfaction in their study of 1,597 nurses. Group cohesion is "an important aspect of job satisfaction and predictability in staying within a hospital setting" (Hinshaw et al., 1987, p. 14).

No literature was found that examined the relationship between group cohesion with Air Force nurses. Often military bases are at remote locations. Based upon the author's

experience in the Air Force, in order to cope with being at a remote location, military personnel will often foster or strengthen group cohesion.

Organizational Commitment

Organizational commitment was the fourth index of professional nursing practice as described within the Differentiated Group Professional Practice in Nursing model (Milton et al., 1992; Verran et al., 1988). A strong organizational commitment is one predicator of professionalism (Bartol, 1979, Glisson & Durick, 1988).

Therefore, organizational commitment was the fourth concept within the conceptual framework. Organizational commitment is defined as the relative strength of an individual's identification with and involvement in a particular organization (Mowday, Steers, & Porter, 1979). It can be characterized as: (1) a strong belief in and acceptance of the organizational's goals and values; (2) a willingness to exert considerable effort on behalf of the organization; and (3) a strong desire to maintain membership in the organization.

Bartol (1979) studied professionalism as a predicator of organizational commitment, role stress, and turnover. Subjects (n = 159) were given a questionnaire by mail. There were five subscales used in measuring professionalism: autonomy, collegial maintenance of standards, ethics, professional commitment, and professional identification.

Bartol found that autonomy, professional commitment, and ethics positively influence organizational commitment. The results also supported the notion that the perception of the reward system as valuing professional behavior is associated with higher organizational commitment and lower role stress, turnover, and turnover expectancy.

Wakefield, Curry, Price, Mueller, and McCloskey (1988) looked at the differences in work unit outcomes in terms of three variables: organizational commitment, job satisfaction, and nursing turnover. Organizational commitment reflected employee loyalty to the hospital. Job satisfaction represented the degree to which employees liked their job. And nursing turnover was defined as the voluntary separation of the individual from the hospital. Subjects (n = 537) were drawn from three small (under 100 beds) and two medium (200-300 beds) hospitals. Units from these hospitals were categorized into either labor intensive units or non-labor intensive units. An example of a labor intensive unit was the intensive care unit. An example of a non-labor intensive unit was a general medical unit. The findings from this research were that labor intensive units had a significantly higher level of job satisfaction than the non-labor intensive units. However, mean levels for organizational commitment and turnover did not significantly differ between a labor intensive unit and a non-labor intensive unit. Differences were found across specialty groups on satisfaction and

turnover, but not for organizational commitment (Wakefield et al., 1988).

Glisson and Durick (1988) examined predictors of job satisfaction and organizational commitment in human service organizations. They looked at 319 individuals from 47 different work groups in 22 different human service organizations. Job satisfaction and organizational commitment were significantly correlated ($r = .64$).

Little research was found in the literature on organizational commitment among Air Force nurse officers. However, one research study that used Air Force subjects is relevant in that both organizational commitment and job satisfaction were measured. McPhee and Townsend (1992) examined the organizational commitment and job satisfaction among air force occupational therapy officers. Organizational commitment in this study was defined using three constructs: belief in the organization's values and goals, willingness to exert extra effort on behalf of the organization and a strong intent to remain employed by the organization. There is a small number (27) of occupational therapy officers in the Air Force. Twenty-three Air Force occupational therapy officers participated in this study. Results of this study indicated that Air Force occupational therapy officers have moderately high levels of organizational commitment and job satisfaction.

Job Satisfaction

Job satisfaction was the fifth concept within the conceptual framework. Job satisfaction was defined as the degree to which an individual appears to like their job (Cavanagh, 1989). Kramer and Hafner (1989) define job satisfaction "as a fluctuating attitudinal state of an individual derived from perception that situational job factors, important to the individual, are present in the job" (p. 173). Stamps and Piedmont (1986) define job satisfaction as the perceived enjoyment and fulfillment of professional aspects of one's work activities performed for pay.

The relationship between job satisfaction and nursing turnover is clearly supported in the literature (Hinshaw et al., 1987; Kirsch, 1990; Lemler & Leach, 1986; Whaley et al., 1989). McCloskey and McCain (1987) studied newly employed nurses in terms of job satisfaction, organizational commitment, and professionalism. Subjects (n = 150) were drawn from all new nurses who joined a large hospital during a specific 16 month time period. The results from this study showed that satisfaction declined over the first six months and then remained steady over the second six months. Organizational commitment also declined over the first six months, but recovered slightly by the end of 12 months. Professionalism also declined slightly within six months and then held steady.

Slavitt, Stamps, Piedmont, and Haase (1978; 1979)

developed the Index of Work Satisfaction measurement instrument. The first part of the measurement instrument determined the relative importance of the various aspects or components of job satisfaction. These components are: pay, autonomy, task requirements, organizational requirements, interaction, and job prestige/status. The second part of the instrument was a Likert-type attitude scale that measured current levels of satisfaction on the same six components.

Hinshaw and Atwood (1986) tested a theoretical model for job satisfaction and anticipated nursing staff turnover. A causal model design was used to test this model. Nursing staff (n = 1,597) from 15 urban and rural hospitals were used in testing this model. Organizational job satisfaction was predicted mostly by job stress, group cohesion, and control over nursing practice. Professional job satisfaction was predicted mostly by job stress, group cohesion, and autonomy.

Cronin-Stubbs (1977) identified factors a new graduate staff nurse consistently described as leading to feelings of job satisfaction and dissatisfaction. New graduate staff nurses (n = 30) were sampled from two hospitals. A semi-structured interview guide developed by Herzberg was used to collect the data. New graduate staff nurses identified factors to account for job satisfaction and job dissatisfaction. Achievement was the factor mentioned most often in accounting for both job satisfaction and dissatisfaction. Recognition was also a leading factor for

job satisfaction. The most significant job dissatisfier was responsibility, followed by the factor of competence-commitment-contentment, interpersonal relations with subordinates, and working conditions.

Johnston (1991) investigated sources of job satisfaction and dissatisfaction perceived by 285 registered nurses in one facility. The Index of Work Satisfaction (Stamps & Piedmont, 1986) was used to measure job satisfaction. Part A of this scale is a 15-item forced choice paired comparison tool designed to measure the degree of importance that subjects assign the job satisfaction constructs. These constructs are: pay, autonomy, task requirements, organizational policies, interaction, and professional status. The components were ranked from highest to lowest as follows: pay, professional status, autonomy, interaction, task requirements, and then organizational policies. Pay, closely followed by professional status and autonomy, were the three variables ranked as most important and most likely to have an effect on satisfaction and morale.

Part B of the scale is a 44-item questionnaire that uses a 7 point Likert-type attitude scale to measure the level of satisfaction for the same six components. Rankings for Part B of the job satisfaction scale from highest to lowest were: professional status, autonomy, interaction, task requirements, organizational policies, and then pay. Overall the findings of this study suggested generalized

dissatisfaction with the work environment. No research was found in the literature that examined the job satisfaction of Air Force nurses.

Anticipated Turnover

Anticipated turnover was the sixth concept within the conceptual framework. Anticipated turnover is one aspect of retention along with turnover, vacancy and stability. Turnover is defined as the percentage of employees who leave their job during the year (Hofmann, 1981). Turnover can either be voluntary or involuntary. Voluntary turnover is initiated by the employee where as involuntary turnover is initiated by the organization (Bluedorn, 1978).

Anticipated turnover is defined as the degree to which nursing staff perceived they would terminate their position eventually at some unspecified time in the future (Hinshaw et al., 1987). Vacancy is defined as the number of unfilled and budgeted positions (Prescott, 1986). Stability is defined as those nurses who stay in their position within the organization (Prescott, 1986).

Birkenstock (1991) states that "retaining nurses involves encouraging autonomy, involvement, and innovation" (p. 111). Successful strategies to retain nurses can not be done by administrators alone. The nurse manager and the staff nurse must also play key roles in both recruiting and retaining good nurses.

Jones (1992) examined the turnover at four southwestern

hospitals in 1988. Turnover costs examined were broken into either direct or indirect costs. Direct costs were advertising/recruiting costs, unfilled position costs, and hiring costs. Indirect costs were orientation, training costs, decreased new registered nurse productivity costs, and termination costs. Direct nursing turnover costs constituted the largest portion (64%) of the total nursing costs. For fiscal year 1988, the total mean cost of turnover for the four hospitals was $902,590. Clearly the nursing turnover costs can be staggering to an organization. This cost can significantly be decreased if nurses can be retained rather than constantly being recruited. Obviously, to help decrease the monetary drain on an organization, the focus needs to shift to retention rather than just on recruitment efforts.

Prescott (1986) investigated data collected from 1,044 staff nurses working on 90 inpatient units in 15 different hospital to determine if organizational, administrative, and practice factors differentiated among hospitals and patient care units as to registered nurse vacancy, stability, and turnover rate. Results in this study showed several variables, such as working conditions, independence of nursing practice, and type of nursing care provided (functional, team, or primary care) significantly influenced vacancy rates. The variables of years of experience, job satisfaction, and working conditions significantly influenced stability rates. And the variables that influenced turnover

rates were the same as those variables in stability plus the variable of staff to patient ratio.

Weisman, Alexander, and Chase (1981) investigated the determinants of staff nurse turnover in a study of 1,259 nurses. Study findings were consistent with a causal chain in which perceived autonomy, job satisfaction, intent to leave the hospital and turnover were a successive sequence of outcomes in a nurse's decision to resign. Organizational commitment was suggested to influence the causal chain between job satisfaction and turnover. Of all the findings, autonomy was the strongest predictor of job satisfaction.

Model Operational Level

The six concepts of this conceptual framework were operationalized using existing measurement instruments. The first concept of autonomy was operationalized through the use of the Dempster Practice Behaviors Scale (Dempster, 1990). The second concept of control over nursing practice was operationalized through the use of the Control Over Nursing Practice Scale (Gerber, 1988). The third concept of group cohesion was operationalized through the use of the Group Cohesion Scale (Good & Nelson, 1973). The fourth concept of organizational commitment was operationalized through the use of Organizational Commitment Questionnaire (Mowday et al., 1979). In the Organizational Commitment Questionnaire the term of hospital was changed to "military" as the organization. The fifth concept of job satisfaction was

operationalized through the use of the Index of Work Satisfaction of Hospital Nurses (Stamps & Piedmont, 1986). The last concept, retention, was operationalized through the use of the Anticipated Turnover Scale (Hinshaw & Atwood, 1986). Each of these instruments will be further described in Chapter 3.

Summary

The literature clearly supports the concepts and proposed relationships within the conceptual framework. The conceptual framework was described at each of the three levels: the construct level, the concept level, and the operational level. Within the construct level, the relationship between professional nursing practice, nurse satisfaction, and retention was described. The concepts of autonomy, control over nursing practice, group cohesion, organizational commitment, job satisfaction, and anticipated turnover were described within the concept level. Lastly, the operational level was described. Little to no research was found in the literature that examined these constructs and concepts relative to Air Force nurses. Further research looking at military nurses was warranted. Knowledge of the relationships between these constructs and concepts was expected to provide military nursing administration with a baseline of information that can be used to help plan future retention strategies.

CHAPTER 3

METHODOLOGY

The research design, setting, sample, protection of human subjects data collection protocol, instrumentation, and data analysis are described in this chapter.

Methodology

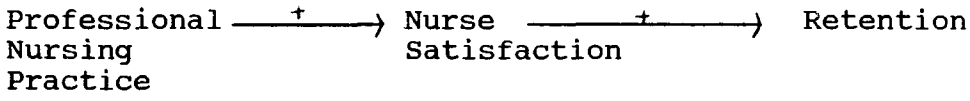
Research Design

A causal modeling, nonexperimental research design was used for this study. Causal modeling is useful to explain the relationship or links between variables (Asher, 1983; Budd & McKeehan, 1986). The causal hypothesis explains the occurrence of a particular phenomena. In other words, the connection between the cause and the effect can be described using this research design (Ferketich & Verran, 1990). The review of the literature supported the relationships between the constructs and concepts for using a causal model, nonexperimental design. Figure 3 shows the schematic model for this study.

Setting

Three United States Air Force bases in Arizona were used in this study. Luke Air Force Base has a hospital with a 40-bed inpatient capacity. Davis-Monthan Air Force Base hospital has a 40-bed inpatient capacity. Williams Air Force Base hospital had a 25-bed inpatient capacity before the base closed in February 1993.

CONSTRUCT LEVEL



CONCEPT LEVEL:

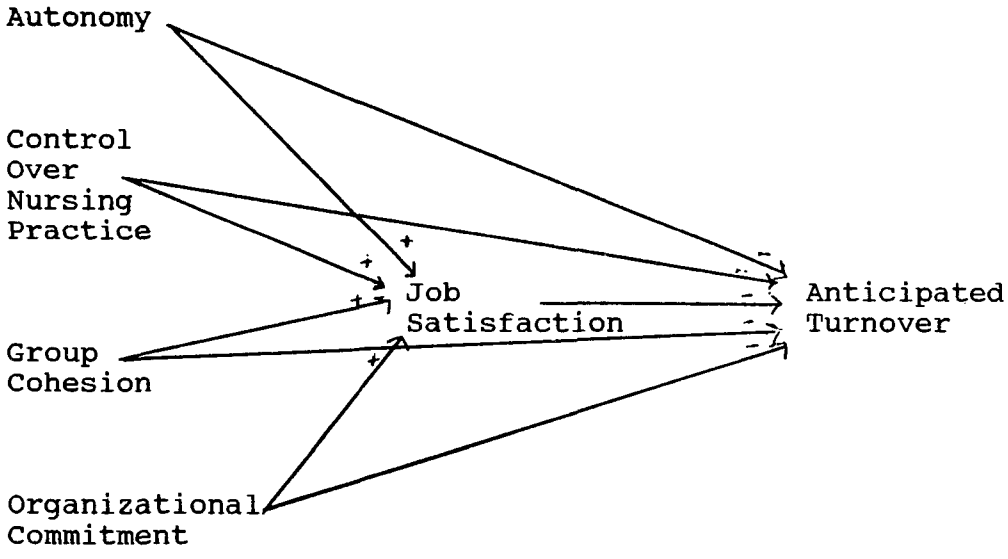


Figure 3: Causal Model for Influence of Professional Nursing Practice on Nurse Satisfaction and Retention

Sample

The sample for this study was a convenience sample of 79 Air Force nurse officers assigned to one of the three base hospitals. The sampling unit provided a total of 106 active duty Air Force nurses. The criteria for selection for this study was that the subject must be an active duty Air Force nurse, read English and be assigned to one of the three targeted Air Force base hospitals. All potential subjects were invited to participate in the study. The response rate was 75 percent.

Protection of Human Subjects

All subjects were invited to voluntarily participate in this study. Institutional review and approval to conduct the study was provided by the University of Arizona Human Subjects Committee (Appendix A). A disclaimer was used to inform the participants that no potential risks or benefits were identified in this study (Appendix B). Participant anonymity was maintained throughout the study by using assigned code numbers on all data collection forms. The master list of subjects was kept by the investigator in a locked file.

Data Collection Protocol

In each of the military bases, the investigator briefed the military nurses on the study through unit staff meetings and individually. Questionnaires were given to each nurse assigned to these three bases. The questionnaire is composed

of questions using a Likert-type format with response formats ranging from agree strongly to disagree strongly. The data obtained consisted of demographic information and individual nurse responses to the six instruments. The sequencing of the six instruments was randomly varied within the questionnaire booklet. The completed questionnaires were returned to the investigator in a sealed, unmarked envelope. The collected data were then entered into a computer in the research office at the University of Arizona College of Nursing for statistical analysis.

Instrumentation

The instruments used to operationalize the concepts in this study are shown in Table 1. The concept of autonomy was operationalized through the use of Dempster Practice Behaviors Scale (Dempster, 1990). This scale consisted of 30 Likert type questions with a five point scaling from not true at all to extremely true (Appendix C). Construct validity was established through construction of a multitrait-multimethod matrix. Dempster (1990) reported a Cronbach's alpha of .95.

The second concept of control over nursing practice was operationalized through the use of the Control Over Nursing Practice Scale (Gerber, 1988). This scale was initially developed for use in the Differentiated Group Professional Practice (DGPP) in Nursing project. This scale consisted of 23 Likert-type questions (Appendix D). The reported

Table 1: Identification of Concepts, Conceptual Definitions, and Instruments

Concept	Conceptual Definition	Instrument
Autonomy	Perceived independence in job performance	Dempster Practice Behaviors Scale (Dempster, 1990)
Control Over Nursing Practice	The freedom to evaluate and modify nursing practice and to influence others	Control Over Nursing Practice (Gerber, 1988)
Group Cohesion	Results of all forces influencing members to stay in a group	Group Cohesion Scale (Good & Nelson, 1973)
Organizational Commitment	The relative strength of one's identification and involvement in the organization	Organizational Commitment Questionnaire (Mowday, Steers, Porter, 1979)
Nurse Satisfaction	Enjoyment and perceived fulfillment of professional aspects of the activity performed for pay.	Index of Work Satisfaction of Hospital Nurses (Stamps & Piedmont, 1986)
Retention	A nursing staff member's perception or opinion of the possibility of voluntarily terminating his or her current position	Anticipated Turnover Scale (Hinshaw & Atwood, 1986)

reliabilities for this instrument, when revised with two items dropped, were .89, .92, .92, and .94 when used four times within the DGPP project.

The third concept of group cohesion was operationalized through the use of the Group Cohesion Scale (Good & Nelson, 1973). This scale consisted of six Likert-type questions (Appendix E). Hinshaw and Atwood (1986) reported an alpha reliability of .81.

The fourth concept of organizational commitment was operationalized through the use of the Organizational Commitment Questionnaire (Mowdy et al., 1979). This questionnaire consisted of 15 Likert-type questions (Appendix F). Mowday et al. (1979) reported a coefficient alpha reliability ranging between .82 to .93. McCloskey and McCain (1987) reported a Cronbach's alpha coefficient of .86, .91, and .92 in their use of this instrument.

The fifth concept of job satisfaction was operationalized through the use of the Index of Work Satisfaction of Hospital Nurses (Slavitt et al., 1978; 1979; Stamps and Piedmont, 1986). This scale consisted of 44 Likert-type questions (Appendix G). This scale has seven subscales: pay, autonomy, task requirements, organizational policies, interaction with nurses, interaction with physicians, and professional status. Slavitt et al. (1978) reported an alpha reliability of .92 for this scale. The subscales reliability test scores were reported as: pay, .85;

autonomy, .70; task requirements, .70; organizational policies, .84; interaction, .83; MD-RN relationship, .70; and professional status, .76 (Slavitt et al., 1979).

The sixth concept of retention was operationalized through the use of the Anticipated Turnover Scale (Hinshaw & Atwood, 1986). This scale consisted of 12 Likert-type questions (Appendix H). Hinshaw and Atwood (1986) reported an internal consistency reliability estimate of .84 for this scale.

Data Analysis Plan

Data collected from military nurses from the three Air Force bases were entered into the computer and was analyzed using the Statistical Packages for the Social Science computer program in the College of Nursing Data Lab. Probability levels for statistical significance was set at $p \leq .05$ level. Descriptive statistics were used to describe the sample. A Cronbach's alpha was used to identify the internal consistency of each scale and subscale.

Research question #1 asked: What is the influence of professional nursing practice on nurse satisfaction and retention among active duty United States Air Force nurse officers? This research questions was analyzed using multiple regression analysis to establish the influence of professional nursing practice using the four concepts of autonomy, control over nursing practice, group cohesion, and organizational commitment, on nurse satisfaction as measured

by the fifth concept of job satisfaction and on retention as measured by the sixth concept of anticipated turnover.

Research question #2 asked: What are the bivariate relationships among autonomy, control over nursing practice, group cohesion, organizational commitment, nurse satisfaction, and anticipated turnover among active duty United States Air Force nurse officers? This research question was analyzed using the Pearson's Product-Moment Correlation Coefficient to establish the direction and strength of relationship between these six concepts.

Research question #3 asked: What are the similarities and differences between company grade and field grade nurse officers with respect to each of the following: autonomy, control over practice, group cohesion, organizational commitment, job satisfaction, and anticipated turnover? This research question was answered using a t-Test to compare the mean score differences between company grade and field grade nurse officers in terms of the six concepts.

Summary

A causal, non-experimental research design was used to explore the influence of professional nursing practice on nurse satisfaction and retention. Active duty nurses (n = 79) from three United States Air Force Base hospitals were surveyed. A randomly sequenced questionnaire was given to all active duty nurses to measure the six concepts within this study: autonomy, control over nursing practice, group

cohesion, organizational commitment, job satisfaction, and anticipated turnover.

The six instruments used in this study were the Dempster Practice Behaviors Scale, Control Over Nursing Practice Scale, Group Cohesion Scale, Organizational Commitment Questionnaire, Index of Work Satisfaction of Hospital Nurses, and Anticipated Turnover Scale. The reliabilities for each of these scales were described and were all above .81. The data analysis plan was described. Descriptive statistics, Cronbach's alpha, multiple regressions, Pearson's Product-Moment Correlation Coefficient and a t-Test were used to answer the three research questions.

CHAPTER 4

RESULTS OF DATA ANALYSIS

The results are presented in six sections. The first section includes the demographic characteristics of the sample. In the second section the internal consistencies for all the scales used in the study are described. The third section contains the description of major concepts. The fourth section includes multiple regressions to answer research question number one. The fifth section includes Pearson's Product-Moment Correlation Coefficients to answer research question number two. And the sixth section includes the t-Test to answer research question number three.

Demographic Characteristics

Descriptive statistics of mean, standard deviation (SD) and frequency were used to describe the data obtained from the demographic variables. The sample consisted of 61 females and 18 males with a mean age of 37 (SD = 6.2) years, with a range from 23 to 54 years. The mean number of months at a base hospital was 22 (SD = 17.8) months with a range from two months to 7.5 years. The average number of years licensed as a registered nurse was 12.4 (SD = 7.3) years, with a range from eight months to 33 years.

Nursing positions included staff nurses (38%), charge nurses (21.3%), assistant charge nurses (10.1%), supervisors (6.3%), nurse practitioners (7.5%), chief nurse/assistant chief nurses (5%), nurse anesthetists (3.8%), staff

development (2.5%) and midwifes (1.3%). Basic preparation in nursing was as follows: 11 (14%) had a diploma, four (5%) had an associated degree, and 64 (81%) had a baccalaureate degree.

The highest level of education completed for this sample was as follows: 41 (52%) Baccalaureate degrees (in nursing), two (3%) Baccalaureate degrees (not in nursing), three (4%) had two Baccalaureate degrees (one in nursing and one not in nursing), 14 (18%) Master's degrees (in nursing), 12 (15%) Master's degrees (not in nursing), two (3%) had two Master's degrees, (one in nursing and one not in nursing), two (3%) had nurse practitioner certificates.

In terms of military related information, the average number of years in the Air Force was 9.7 (SD = 6.1) years, with a range from 1 to 22 years. The average number of assignments was 4.1 (SD = 2.5), with a range from 1 to 11 assignments. The rank of the sample ranged from second lieutenant through colonel. Fifty company grade officers (second lieutenant, first lieutenant, and captain) and 29 field grade officers (major, lieutenant colonel, and colonel) comprised the sample. The level of completion of professional military education is shown in Table 2.

Reliability Analysis

Estimates of internal consistency reliability for all scales and subscales were obtained by computing Cronbach's alpha (Table 3). A standardized coefficient alpha

Table 2. Professional Military Education (PME)

PME Completed	n	%
NSM only	7	.09
SOS only	4	.05
NSM and SOS	15	.19
SOS and ACSC	3	.04
SOS, ACSC, and AWC	1	.01
NSM, SOS, and ACSC	16	.20
NSM, SOS, ACSC, and AWC	2	.03
NSM, SOS, ACSC and NSC	2	.03
Missing data	29	.37

Note: NSM = Nursing Service Management
SOS = Squadron Officer School
ACSC = Air Command and Staff College
AWC = Air War College
NSC = National Security Management

Table 3. Alpha Reliabilities for Scales and Subscales

Scale/Questionnaire	Alpha
Group Cohesion	.89
Dempster Practice Behaviors Scale	.90
Control Over Nursing Practice	.95
Organizational Commitment	.91
Work Satisfaction (total)	.92
Professional Status	.79
Task Requirements	.69*
Pay	.84
Interaction MD-RN	.88
Interaction RN-RN	.79
Organizational Policies	.76
Autonomy	.79
Anticipated Turnover	.89

Note: * alpha coefficient below criterion level of .70

reliability of equal to or greater then .70 was accepted as an adequate measure of internal consistency. All scales met the criterion for adequacy with the exception of the subscale of task requirement in the Index of Work Satisfaction of Hospital Nurses. The alpha reliability for task requirement was .69.

Description of Major Concepts

The six instruments used in this study consisted of the following: Dempster's practice behaviors scale, control over nursing practice scale, group cohesion scale, organizational commitment scale, index of work satisfaction scale, and anticipated turnover scale.

Dempster Practice Behaviors Scale consisted of 30 Likert-type questions with a five point response choice with a mean of 113.79 (SD = 14.29). Control over nursing practice consisted of 23 Likert-type questions with a seven point scale with a mean of 110.19 (SD = 27.89). The group cohesion scale consisted of six questions with a seven point response range with a mean of 17.40 (SD = 6.91). The organizational commitment scale consisted of 15 Likert-type questions with a seven point response choice with a mean of 74.91 (SD = 16.00). The Index of Work Satisfaction scale consisted of 44 Likert-type questions with a seven point response choice and 15 paired comparison for a forced choice response. This 15 paired comparison was completed but not analyzed for this study.

The means for the subscales ranged from 39.29 (SD = 8.55) for professional statue to 20.55 (SD = 6.08) for task requirements. The last scale, anticipated turnover scale consisted of 12 Likert-type questions with a seven point response choice with a mean of 43.83 (SD = 17.29). Table 4 shows the means and standard deviations for the study sample on each of these scales. Qualitative comments made at the end of the questionnaire will be used to support interpretation of findings in Chapter 5.

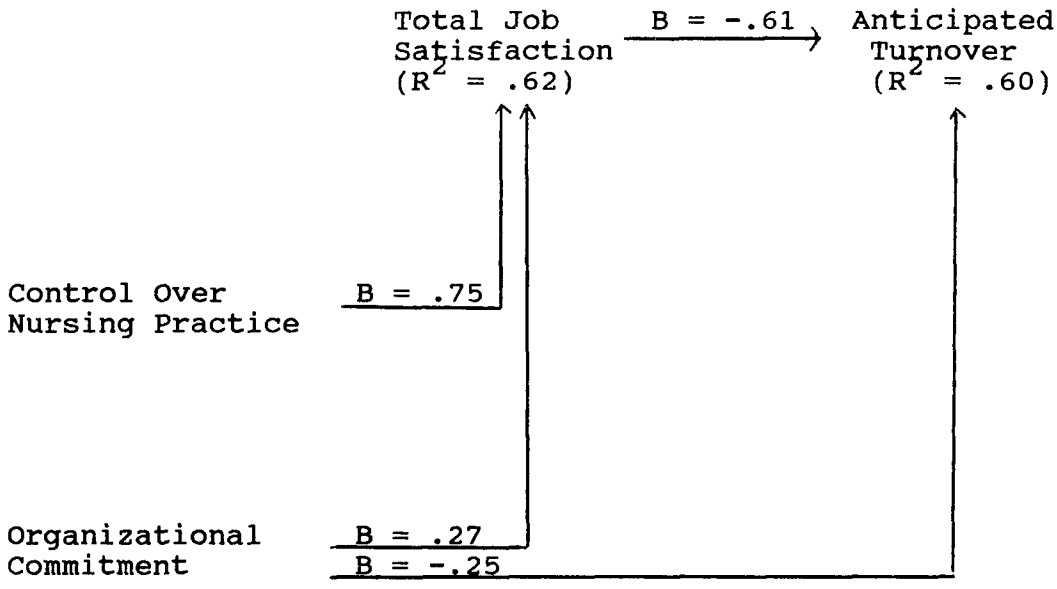
Analysis of Multiple Regression

Multiple regression analysis was done to establish the influence of professional nursing practice on nurse satisfaction and retention among active duty Air Force nurses. The concept of control over nursing practice and organizational commitment demonstrated a positive influence on total job satisfaction (Figure 4). These two concepts explained 62% of the variance of total job satisfaction. The concepts of group cohesion and autonomy did not enter the equation. Control over nursing practice (Beta = .75) was the most significant concept to influence total job satisfaction.

The concept of organizational commitment and total job satisfaction demonstrated a negative or inverse influence on anticipated turnover. These two concepts explained 42% of the variance for anticipated turnover. The concepts of group cohesion, autonomy, and control over nursing practice did not impact on anticipated turnover. Total job satisfaction

Table 4. Instruments: Means and Standard Deviations

Instrument	Mean	SD	Possible Range
Dempster Practice Behaviors Scale (n = 68)	113.79	14.29	30 to 150
Control Over Nursing Practice (n = 69)	110.19	27.89	23 to 161
Group Cohesion (n = 76)	17.40	6.91	6 to 42
Organizational Commitment (n = 77)	74.91	16.00	15 to 105
Index of Work Satisfaction (n = 69)	187.03	34.36	44 to 308
Professional Status	34.70	7.49	7 to 49
Task Requirements	20.55	6.08	7 to 42
Pay	21.06	7.08	7 to 42
MD-RN Interaction	23.26	6.63	7 to 35
RN-RN Interaction	25.33	6.04	7 to 35
Organizational Policies	22.84	8.14	7 to 49
Autonomy	39.29	8.55	8 to 56
Anticipated Turnover (n = 77)	43.83	17.29	12 to 84



Note: B = Beta

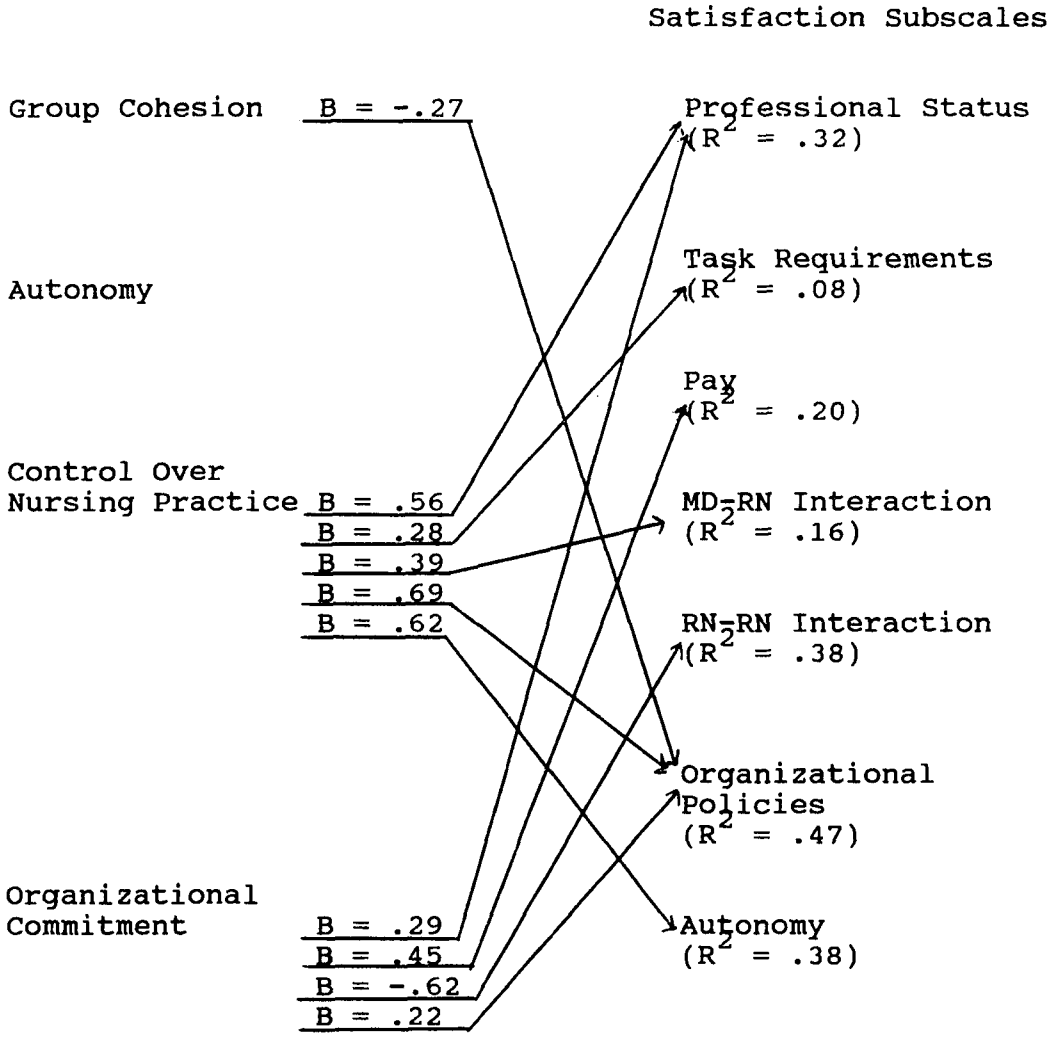
Figure 4: Empirical Model: Influence of Professional Nursing Practice on Total Job Satisfaction and Anticipated Turnover

(Beta = -.61) was the most significant factor to influence anticipated turnover.

The analysis of the impact of autonomy, control over nursing practice, group cohesion, and organizational commitment on the seven subscales of the total job satisfaction scale demonstrated varying configurations of influence (Figure 5). Satisfaction with professional status (R^2 = .32) was influenced by control over nursing practice (Beta = .56) and by organizational commitment (Beta = .29). Satisfaction with task requirements (R^2 = .08) was influenced by only control over nursing practice (Beta = .28). Satisfaction with pay (R^2 = .20) was influenced by only organizational commitment (Beta = .45). Satisfaction with MD-RN interaction (R^2 = .16) was influenced only by control over nursing practice (Beta = .39). Satisfaction with RN-RN interaction (R^2 = .38) was negatively influenced by only organizational commitment (Beta = -.62). Satisfaction with organizational policies (R^2 = .47) was negatively influenced by group cohesion (Beta = -.27) and positively influenced by control over nursing practice (Beta = .69) and by organizational commitment (Beta = .22). Satisfaction with autonomy (R^2 = .38) was influenced by only control over nursing practice (Beta = .62).

Analysis of Correlations

The Pearson's Product-Moment Correlation Coefficient was completed to establish if relationships existed between the



Note: B = Beta

Figure 5: Empirical Model: Satisfaction Subscales

six concepts: autonomy, control over nursing practice, group cohesion, organizational commitment, job satisfaction, and anticipated turnover. The correlations between these six concepts are presented in Table 5. Table 6 contains the correlations between the six concepts and the subscales of total job satisfaction.

Strong correlations, that is coefficients greater than .50, were found for the following scales: control over nursing practice with total satisfaction (r = .76), control over nursing practice and anticipated turnover (r = -.51), organizational commitment with total satisfaction (r = .54), total satisfaction with anticipated turnover (r = -.65), and organizational commitment and anticipated turnover (r = -.52).

Several of the subscales within the index of work satisfaction scale also showed several strong correlations. These subscale correlations were: 1) control over nursing practice with professional status (r = .54), with organizational policies (r = .67), and with autonomy (r = .69); 2) group cohesion with nurse to nurse interaction (r = -.64) and with organizational policies (r = -.54); and 3) anticipated turnover with organizational policies (r = -.53) and with autonomy (r = -.67).

Moderate correlations, that is coefficients between .30 and .50 were found for the following scales: control over nursing practice with group cohesion (r = -.48), control

Table 5. Pearson's Product-Moment Correlation Coefficients for Scales

	COH	DPBS	CONP	COM	TOTS	TOVER
COH	1.00	-.03	-.48 **	-.08	-.49 **	.30 **
DPBS		1.00	.38 **	.32 **	.25 *	-.30 **
CONP			1.00	.38 **	.76 **	-.51 **
COM				1.00	.54 **	-.52 **
TOTS					1.00	-.65 **
TOVER						1.00

Note: * = $p \leq .05$ ** = $p \leq .01$

Key: COH = Group Cohesion Scale
DPBS = Dempster Practice Behaviors Scale
CONP = Control Over Nursing Practice
COM = Organizational Commitment
TOTS = Index of Work Satisfaction Scale (Total Scale)
TOVER = Anticipated Turnover Scale

Table 6. Pearson's Product-Moment Correlation Coefficients for Subscales

	PROF	TASK	PAY	INMD	INRN	ORG	AUT
COH	-.18	-.33 **	-.13	-.13	-.64 **	-.54 **	-.43 **
DPBS	.32 **	.10	.10	.02	.18	.18	.35 **
CONP	.54 **	.36 **	.40 **	.37 **	.44 **	.67 **	.69 **
COM	.44 **	.20	.36 **	.28 *	.17	.42 **	.45 88
TOTS	.80 **	.63 **	.57 **	.62 **	.57 **	.71 **	.84 **
TOVER	-.43 **	-.33 **	-.29 *	-.36 **	-.38 **	-.53 **	-.67 **

Note: * = $p \leq .05$ ** = $p \leq .01$

Key: COH = Group Cohesion Scale
DPBS = Dempster Practice Behaviors Scale
CONP = Control Over Nursing Practice
COM = Organizational Commitment
TOTS = Index of Work Satisfaction Scale (Total Scale)
Subscales:
PROF = Professional Status
TASK = Task Requirements
Pay = Pay
INMD = Physician-nurse Interaction
INRN = Nurse-nurse Interaction
ORG = Organizational Policies
AUT = Autonomy
TOVER = Anticipated Turnover

over nursing practice with autonomy (r = .38), control over nursing practice with organizational commitment (r = .38), autonomy with organizational commitment (r = .32), autonomy with anticipated turnover (r = -.30), and group cohesion with total job satisfaction (r = -.49).

Several of the subscales within the index of work satisfaction scale also showed moderate correlations. These subscales were: 1) control over nursing practice with task requirements (r = .36), with pay (r = .40), with MD-RN interaction (r = .37) and with RN-RN interaction (r = .44); 2) autonomy, as measured by Dempster's Practice Behavior Scale, with professional status (r = .32), and with autonomy (r = .35); 3) group cohesion with autonomy (r = -.43); 4) organizational commitment with professional status (r = .44), with pay (r = .36), with organizational policies (r = .42), and with autonomy (r = .45); and 5) anticipated turnover with professional status (r = -.43), with task requirements (r = -.33), with MD-RN interaction (r = -.36) and with RN-RN interaction (r = -.38).

t-Test Analysis

The t-Test was performed to test for differences in mean scores between company grade and field grade officers with regard to the identified concepts: autonomy, control over nursing practice, group cohesion, organizational commitment, job satisfaction (subscale and total satisfaction), and anticipated turnover. The means, standard deviation and

t-test results are presented in Table 7.

The measure for group cohesion did not differ significantly between the two groups ($t = .19$, $p = .85$). The mean of 17.51 ($SD = 6.9$) for company grade was similar to the mean of 17.19 ($SD = 7.1$) for field grade officers. The measure for autonomy, that is the Dempster's Practice Behavior Scale, did not differ significantly between the two groups ($t = -1.82$, $p = 0.07$). The mean of 111.50 ($SD = 13.44$) for company grade was similar to the mean of 118.00 ($SD = 15.11$) for field grade officers.

The measure for control over nursing practice scale was significantly different between the two groups ($t = -4.05$, $p = < .01$). The mean of 102.06 ($SD = 26.17$) for company grade was significantly lower than the 128.76 ($SD = 22.70$) for field grade officers. The measure for organizational commitment was significantly different between the two groups ($t = -2.47$, $p = .02$). The mean of 71.85 ($SD = 17.79$) for company grade was significantly lower than the mean of 79.97 ($SD = 11.03$) for field grade officers.

The measure of total satisfaction was not significantly different between the two groups ($t = -1.53$, $p = .13$). The mean for company grade was 182.88 ($SD = 33.95$) and the mean for field grade officers was 196.52 ($SD = 34.20$). An examination of the seven subscales within the total satisfaction scale revealed significant differences related to satisfaction with pay, organizational policies and

Table 7: t-Test on Group Cohesion, Dempster Practice Behavior Scale, Control Over Nursing Practice, Organizational Commitment, Job Satisfaction, and Anticipated Turnover for Company and Field Grade Nurse Officers.

Scale	Company Grade (n = 50) Mean	SD	Field Grade (n = 29) Mean	SD	t value	2-tail prob
COH	17.51	6.9	17.19	7.1	.19	.85
DPBS	111.50	13.44	118.00	15.11	-1.82	.07
CONP	102.06	26.17	128.76	22.70	-4.05	< .01
COM	71.85	17.79	79.97	11.03	-2.47	.02*
TOTS	182.88	33.95	196.52	34.20	-1.53	.13
PROF	34.78	7.43	34.37	6.87	.24	.81
TASK	21.27	6.42	19.83	6.51	.89	.38
PAY	19.90	6.86	23.63	7.19	-2.15	.04
INMD	23.10	6.11	23.32	7.31	-.14	.89
INRN	25.22	5.82	26.44	6.15	-.84	.40
ORG	21.59	8.02	25.96	7.68	-2.28	.03
AUT	37.72	8.40	43.80	7.25	-3.09	< .01
TOVER	48.35	17.64	35.93	13.66	3.21	< .01

Note: * Separate variance estimate used in calculation

Key: COH = Group Cohesion Scale
DPBS = Dempster's Practice Behaviors Scale
CONP = Control Over Nursing Practice Scale
COM = Organizational Commitment Scale
TOTS = Index of Work Satisfaction (Total Scale)
Subscales: PROF = Professional Status
TASK = Task Requirements
PAY = Pay
INMD = Interaction MD-RN
INRN = Interaction RN-RN
ORG = Organizational Policies
AUT = Autonomy
TOVER = Anticipated Turnover Scale

autonomy. Satisfaction with pay was significantly higher ($t = -2.15$, $p = .04$) for the field grade (mean = 23.65, SD = 7.19) then company grade officers (mean = 19.90, SD = 6.86). Satisfaction with organizational policies was significantly higher ($t = -2.23$, $p = .03$) for the field grade (mean = 25.96, SD = 7.68) then company grade officers (mean = 21.59, SD = 8.02). Satisfaction with autonomy was also found to be significantly higher ($t = -3.09$, $p = < .01$) for the field grade (mean = 43.80, SD = 7.25) than the company grade officers (mean = 37.73, SD = 8.40). The measure for anticipated turnover did vary significantly between the two groups ($t = 3.21$, $p = <.01$). The mean of 48.35 (SD = 17.64) for company grade was significantly higher than the mean of 35.93 (SD = 13.66) for field grade officers.

Summary

Descriptive statistics of mean, standard deviation, and frequency were used to describe the sample of 61 females and 18 males with a mean age of 37 (SD = 6.2) years, with an average length of 22 (SD = 17.8) months at the base hospital, and an average number of years licensed as a registered nurse was 12.3 (SD = 7.4) years. Nursing positions ranged from staff nurse to the chief nurse. Basic nursing education preparation ranged from diploma to baccalaureate degree. The average number of years in the Air Force was 9.7 (SD = 6.1) years with an average of 4.1 (SD = 2.5) assignments. A total of 50 company grade officers and 29 field grade officers

participated within this study.

Reliability analysis was computed using Cronbach's alpha. All scales except for the task requirement subscale in the index of work satisfaction was equal to or greater than .76.

Multiple regression analysis was performed to measure the influence of professional nursing practice on total job satisfaction and anticipated turnover. Control over nursing practice and organizational influenced total job satisfaction. Organizational commitment and total job satisfaction negatively influenced anticipated turnover. In terms of the seven subscales within total job satisfaction, all subscales were influenced by either group cohesion, control over nursing practice, and organizational commitment. Autonomy as measured by Dempster's Practice Behaviors Scale did not influence any of the subscales or any of the other identified concepts.

The Pearson's Product-Moment Correlation Coefficient was used to describe relationships between the identified concepts. Strong correlations were found for (1) control over nursing practice with total job satisfaction and also with anticipated turnover; (2) organizational commitment with total job satisfaction and also with anticipated turnover; and (3) total satisfaction with anticipated turnover.

There were three statistically significant differences identified by the t-Test between company grade and field

grade officers and these were control over nursing practice, organizational commitment, and anticipated turnover. The statistically significant t-Test difference within the total job satisfaction scale were pay, organizational policies and autonomy.

CHAPTER 5

INTERPRETATION, CONCLUSIONS, AND RECOMMENDATIONS

This study had three purposes. The first purpose was to examine the influence of professional nursing practice on nurse satisfaction and retention among active duty Air Force nurses. The second purpose was to determine what relationships existed between autonomy, control over nursing practice, group cohesion, organizational commitment, job satisfaction, and anticipated turnover among active duty Air Force nurses. The third purpose was to identify the differences and similarities between company grade and field grade nurse officers' self reports of professional nursing practice (autonomy, control over nursing practice, group cohesion, and organizational commitment), job satisfaction, and anticipated turnover. The interpretation of the findings are discussed relative to the conceptual framework and to each research question. Limitations of the study are discussed, and the implications for nursing research are presented.

Analysis of Conceptual Framework

The conceptual framework for this study was based on the theoretical model developed in the Differentiated Group Professional Practice in Nursing Model (Verran, Murdaugh, Gerber, & Milton, 1988) and the theoretical model from a study of anticipated turnover among nursing staff (Hinshaw & Atwood, 1986). The review of the literature supported the

relationships between the conceptual model constructs and concepts.

The results from this study partially supports the conceptual model. The concept level of the model predicted that autonomy, control over nursing practice, group cohesion, and organizational commitment would positively influence job satisfaction and job satisfaction would negatively influence turnover. Only two of the concepts, control over nursing practice and organizational commitment positively influenced job satisfaction in this study. Job satisfaction negatively influenced anticipated turnover and organizational commitment also had a negative influence on anticipated turnover.

Interpretation of Findings Related to Research Question #1

Multiple regression analysis was performed to determine the influence of professional nursing practice on nurse satisfaction and retention among active duty Air Force nurses. Only two concepts used in defining professional nursing practice, control over nursing practice and organizational commitment, demonstrated a positive influence on nurse satisfaction.

Neither autonomy nor group cohesion influenced total job satisfaction. One possible interpretation for why autonomy did not influence job satisfaction is related to the instrument used to measure this concept. There was a low correlation between the subscale of satisfaction with

autonomy and Dempster Practice Behaviors Scale (.26), which was used to measure autonomy. It would be expected that theoretically, nurses who had high scores on one scale would have high scores on the other scale, i.e. the higher the nurses autonomy, the more satisfied they would be with their autonomy.

Dempster Practice Behaviors Scale was originally developed to measure the extent of autonomous behaviors among nurse practitioners. Dempster (1990) points out that this instrument focused on behaviors, actions, and conduct related to the extent of individual autonomy in a practice setting. The military practice setting may be significantly different enough from the civilian setting so that this instrument could not identify the autonomous behaviors of military nursing practice.

Autonomy was identified as an issue in written comments from the participants. One participant in the study wrote the following comment about autonomy, "There is no doubt in my mind that the Air Force offers more autonomy and opportunity for growth, basically because of the challenges we face on a day-to-day basis." This theme was repeated by several participants, that is that autonomy was very important to them in their nursing practice in the military.

Group cohesion was the second concept that did not influence job satisfaction. One possible interpretation on why group cohesion did not influence total job satisfaction

may be the perceived differences between the military and civilian nursing staff. Participants repeatedly made comments about the civilian nursing personnel. Participants' comments that highlight this concern are, "The military members working on my unit, both nurses and techs, are professional, competent, and caring; the civilians, both contract and civil service are less then professional and sometimes, marginally competent." "Most of the problems seem to stem from the civilian nurses." And "...cooperation is difficult since they [civilians] consider the union their boss...they are less willing to help..."

This perceived difference may have greatly influenced each participant's answer to the group cohesion scale. The participants were instructed to evaluate the group that they worked with on their nursing unit or clinic. Further clarification of assessing only the military members may have given a more accurate reflection of group cohesion. One comment may illustrate this point, "It was the collegiality I experienced between nurses, technicians, and doctors that kept me in the service."

Total Job Satisfaction

Control over nursing practice explained most of the total job satisfaction experienced by Air Force nurses. One possible interpretation for control over nursing practice accounting for such a high variance might be the unique setting for military nursing. Based on the author's

experience, military nurses often have a greater role in clinical decision making based on their nursing experience and rank.

Organizational commitment also explained some of the total job satisfaction experienced by Air Force nurses. One possible interpretation for organizational commitment contributing to total job satisfaction is that military nurses develop over time a feeling of commitment to the Air Force if they have been satisfied in their jobs. If the military nurse is not satisfied with his or her job then one would expect to see a decrease in organizational commitment.

Satisfaction Subscales

In terms of the subscales within total job satisfaction, three of the four concepts explained some of the overall variance within job satisfaction. Control over nursing practice influenced professional status, task requirements, physician-nurse interaction, organizational policies, and autonomy. Pay was the only subscale that control over nursing practice did not influence.

One possible interpretation for control over nursing practice on professional status and autonomy is that of the role of being an officer in the Air Force. Based on the author's experience, officers are often equated with professionals. Officership is stressed in the Air Force in terms of both job performance and higher education levels, which includes professional military education. The majority

of this sample had completed various levels of professional military education.

Perceptions of professional status varied between participants. An example of one participant's positive viewpoint is "I have always felt that I was treated as a professional and we look professional." An example of one participant's negative viewpoint is "because we do not see ourselves as professionals, we argue about RN/tech duties, and treat our techs with as much disrespect as we perceive the doctors showing us, this tears down teamwork and gives others the impression that nurses are not professional."

One possible interpretation for control over nursing practice on task requirements and on organizational policies is the impact of Air Force rules and regulations. Often there may be no choice on what the rules and regulations are, so the Air Force nurse has learned to control his or her nursing practice within the military bureaucratic constraints. One possible interpretation for control over nursing practice and physician-nurse interaction is that Air Force nurses promote better physician-nurse communication which in turn helps them in playing a greater role in clinical decision making.

Since control over nursing practice was the most important factor identified in job satisfaction, this would suggest that to reduce turnover or to keep Air Force nurses satisfied, one would need to increase Air Force nurses

control over nursing practice. Along with this increase in control over nursing practice there would also need to be an increase in organizational commitment and group cohesion.

Retention

Two of the concepts, organizational commitment and total job satisfaction negatively influenced anticipated turnover. Total job satisfaction explained most of the variance for anticipated turnover. One possible interpretation for this finding is that the lower the job satisfaction and subsequently a perception of lower organizational commitment, the higher the anticipated turnover. The relationship of decreased organizational commitment and decreased job satisfaction impacting retention is strongly supported in the review of the literature. One comment by a participant illustrates this relationship between satisfaction and retention. The participant wrote, "the nurse corps is strangulating itself by allowing the latest generation of young nurses to become so incredibly dissatisfied that they will do anything to get out."

Since total job satisfaction was the most important factor identified in anticipated turnover, this would suggest that to reduce turnover, one would need to increase total job satisfaction. The majority of the participants' comments on problems with job satisfaction were focused on staffing ratios, shift hours, lack of support, lack of educational opportunities, and lack of position based on educational

preparation rather than on rank.

Interpretation of Findings Related to Research Question #2

The Pearson's Product-Moment Correlation Coefficient was performed to establish if a relationship existed between autonomy, control over nursing practice, group cohesion, organizational commitment, job satisfaction, and anticipated turnover. Findings support various levels of relationships between the six identified concepts. The different levels of correlation used were as follows: strong correlations (greater than .50), moderate correlations (between .30 to .50), and weak correlations (less than .30). Each of the concepts findings are described in terms of where they fit under these three correlation groups.

Strong Correlations

Only three of the six concepts showed strong correlations or relationships, control over nursing practice, organizational commitment and job satisfaction. Control over nursing practice had a stronger correlation with job satisfaction than did organizational commitment. Control over nursing practice, organizational commitment and job satisfaction had a strong inverse relationship with anticipated turnover. However, control over nursing practice and organizational commitment was about equal in their relationship with anticipated turnover. For anticipated turnover, the stronger relationship was with total job

satisfaction.

One possible interpretation for these findings is that control over nursing practice is a major satisfier and subsequently had a positive effect on job satisfaction. Hinshaw and Atwood (1986) found similar results in their study of 1,597 nurses on whether control over nursing practice had a positive effect on job satisfaction. Parallel to control over nursing practice as a satisfier is that of organizational commitment. Organizational commitment also had a positive effect on job satisfaction. McPhee and Townsend (1992) found similar results when looking at organizational commitment and job satisfaction with Air Force Occupational Therapists.

Moderate Correlations

All six of the concepts showed some degree of moderate correlations or relationships. Autonomy showed a positive relationship with control over nursing practice and with organizational commitment and showed an inverse relationship with anticipated turnover. One possible interpretation for this finding is that there may or may not be a distinction made between autonomy and control over nursing practice with Air Force nurses. Bartol (1979) found a similar positive relationship between autonomy and organizational commitment. Weisman, Alexander, and Chase (1981) found a similar inverse relationship with autonomy and turnover.

Control over nursing practice showed an inverse

relationship with group cohesion and a positive relationship with organizational commitment. One possible interpretation for this finding is that the more control over nursing practice one has, the less feelings of group cohesiveness one has, and the more organizational commitment one feels. Group cohesion showed an inverse relationship with job satisfaction and a positive relationship with anticipated turnover. This is an interesting finding and a difficult one to interpretate. This finding goes contrary to what is found in the literature about group cohesion. Group cohesion is suppose to positively influence job satisfaction and retention (Hinshaw, Smeltzer, & Atwood, 1987; McCloskey, 1990).

Low Correlations

Only a few concepts showed low correlations or relationships. Autonomy showed an inverse relationship with group cohesion and anticipated turnover and a positive relationship with total satisfaction. Group cohesion showed an inverse relationship with organizational commitment.

One possible interpretation of these findings in terms of autonomy showing a weak inverse relationship with group cohesion is interesting and as noted above on group cohesion difficult to interpretate. Group cohesion's relationship with the concepts of autonomy, control over nursing practice, organizational commitment and total job satisfaction are all negative relationships. The only positive relationship for

group cohesion is with anticipated turnover. Group cohesion's relationships with the other concepts are all opposite of what is found in the literature. One might speculate that Air Force nurses in this sample perceive little to no group cohesion.

Interpretation of Findings Related to Research Question #3

The t-Test was performed to test for significant differences between company grade and field grade nurse officers with regard to the six identified concepts: autonomy, control over nursing practice, group cohesion, organizational commitment, job satisfaction, and anticipated turnover.

The self-reports of both groups were statistically different on the following scales: control over nursing practice, organizational commitment, and anticipated turnover. One possible interpretation for this finding is that the higher the rank, the greater the amount of control over nursing practice, the greater the amount of organizational commitment, and the lower the turnover among field grade officers. Participant comments reinforce this view in terms of the time they have invested in the military. One participant who had 15 years active duty service time wrote, "Since I am close to retirement, I would not leave the service knowing I would lose all the years I have invested."

The concepts of autonomy, group cohesion, and job

satisfaction were similar between the two groups. One possible interpretation for this finding is that all the sampling was done at small base hospitals and that each of the facilities closely resembled each other. Overall units had the same concerns expressed about problems with group morale, staffing problems, and problems with their civilian nursing personnel. These similar problems were faced by both company and field grade nurses.

The concept of total job satisfaction was not statistically different between the two groups. However, three of the subscales within job satisfaction were statistically different. These subscales were: pay, organizational policies and autonomy. One possible interpretation for this finding is that the higher the rank, the higher the pay, there is more autonomy, and the nurse has usually had a longer period of time in the military to adapt or to adjust to the organizational policies.

The subscales of professional status, task requirements, physician-nurse interaction, and nurse-nurse interaction were similar between the two groups. One possible interpretation for this finding is that nurses despite their rank have the same perspective on professional status, on task requirements, and with interactions either physician to nurse or nurse to nurse.

Limitations of the Study

The first limitation is the instrument chosen to

measure autonomy, Dempster's Practice Behaviors Scale. The question to be answered is was this scale the most appropriate one to measure autonomy. Autonomy has shown to influence both job satisfaction and retention in the literature (Alexander, Weisman, & Chase, 1982; Dwyer, Schwartz, & Fox, 1992; Edwards, 1988; and McCloskey, 1990). However, the research findings for this sample did not support this relationship. Is military nursing different from civilian nursing in terms of autonomy?

The second limitation is the actual sample size. This study had 79/106 (75%) return rate on questionnaires. Since there is a small number of nurses assigned to the targeted military base hospitals generalizability of the findings to the larger population of Air Force nurses may be questionable.

Implications for Research

Since the findings on autonomy and group cohesion were inconsistent with findings from other studies (Hinshaw & Atwood, 1986; Verran et al., 1988) done to measure the influence of professional nursing practice on job satisfaction and retention, one recommendation would be to repeat the comparisons of the concepts using a larger sample size of active duty Air Force nurses. The sample could be increased by sampling a geographical region rather than by one state.

Another recommendation would be to further analyze the

data by actual nursing positions. Several participants wrote that they had dual roles, that of charge nurse and that of staff nurse. Due to this mixture of nursing positions, one participant wrote, "Far too much is expected of charge nurses who predominantly function as staff nurses. A very close look at the dilemma is definitely needed because in my opinion it is a negative influence on professional nursing practice, nurse satisfaction, and retention among Air Force nurses."

Another recommendation for further research would be to focus on increased efforts on factors which influence the development of organizational commitment and job satisfaction. This study and others in the literature support the link between organizational commitment, job satisfaction and retention. What factors make a nurse committed to the Air Force warrants further research.

Summary

Findings from this study partially supported the conceptual framework that was developed from the Differentiated Group Professional Practice Model in Nursing (Verran et al., 1988) and the Anticipated Turnover Model (Hinshaw & Atwood, 1986). In terms of findings related to research question #1, control over nursing practice explained most of the total job satisfaction experience by Air Force nurses and total job satisfaction explained most of the anticipated turnover.

In terms of research question #2, findings support a relationship between autonomy, control over nursing practice, group cohesion, organizational commitment, job satisfaction, and anticipated turnover. In terms of research question #3, three key differences (pay, autonomy, and organizational commitment) were identified between company and field grade nurse officers.

In conclusion, further research is warranted on the issue of professional nursing practice's influence on nurse satisfaction and retention among active duty United States Air Force nurses. Increasing total job satisfaction by increasing both control over nursing practice and organizational commitment should help in retaining Air Force nurses.

APPENDIX A

HUMAN SUBJECTS APPROVAL

Human Subjects Committee

THE UNIVERSITY OF
ARIZONA
HEALTH SCIENCES CENTER

1690 N. Warren (Bldg. 526R
Tucson, Arizona 8572-
(602) 626-6721 or 626-7575

October 28, 1992

Mary Ann Solano
College of Nursing
Arizona Health Sciences Center

RE: INFLUENCES OF PROFESSIONAL NURSING PRACTICE ON NURSE SATISFACTION AND RETENTION AMONG ACTIVE DUTY UNITED STATES AIR FORCE NURSES

Dear Ms. Solano:

We received documents concerning your above cited project. Regulations published by the U.S. Department of Health and Human Services [45 CFR Part 46.101(b)(2)] exempt this type of research from review by our Committee.

Please be advised that approval for this project and the requirement of a subject's consent form is to be determined by your department.

Thank you for informing us of your work. If you have any questions concerning the above, please contact this office.

Sincerely yours,

William F. Denny, M.D.
Chairman,
Human Subjects Committee

WFD:sj

cc: Departmental/College Review Committee

College of Nursing

THE UNIVERSITY OF
ARIZONA
HEALTH SCIENCES CENTER

Tucson, Arizona 85721
(602) 626-6154

MEMORANDUM

TO: Mary Ann Solano

FROM: Leanna Crosby, D.N.Sc., R.N. Director of Intramural Research

DATE: November 4, 1992

SUBJECT: Human Subjects Review: "Influences of Professional Nursing Practice on Nurse Satisfaction and Retention Among Active Duty United States Air Force Nurses "

Your research project has been reviewed and approved by William Denny, M.D., Chairman of the University of Arizona Human Subjects Committee, and deemed to be exempt from review by their full committee. You will be receiving a confirmation letter from Dr. Denny. In addition, your project has been reviewed and approved by the College of Nursing Human Subjects Review Committee.

We wish you a valuable and stimulating experience with your research.

LC/ga

DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY
AIR FORCE INSTITUTE OF TECHNOLOGY
WRIGHT-PATTERSON AIR FORCE BASE OH 45433-6583

REPLY TO
ATTN OF: AFIT/CIMI 16 November 1992
2950 P Street
Wright-Patterson AFB OH 45433-7765

SUBJECT: Survey Approval

TO: MAJOR MARY ANN SOLANO
4880 N SABINO CANYON ROAD APT 16172
TUCSON AZ 85715

1. The survey for your research project entitled "Influence of Professional Nursing Practice on Nurse Satisfaction and Retention Among United State Air Force Nurse Officers" meets specifications as outlined in AFIT Regulation 53-1, and is approved for use in Air Force facilities. In accordance with updated procedures, AFIT has been delegated authority to approve surveys of this type.

2. This letter constitutes authority to initiate data gathering in Air Force facilities.

WILLIAM R. EDMONDSON
Captain, USAF, MSC
Program Manager, Allied Health
Civilian Institution Programs

APPENDIX B

DISCLAIMER

INFLUENCE OF PROFESSIONAL NURSING PRACTICE ON NURSE SATISFACTION AND RETENTION AMONG ACTIVE DUTY UNITED STATES AIR FORCE NURSES

The purpose of this questionnaire is to evaluate the influence of professional nursing practice on nurse satisfaction and retention among active duty United States Air Force nurses.

Participation involves completing the questionnaire packet. Although there may not be any direct benefits to you, there are no known risks. A master list of names will be kept by me for follow-up purposes only. No one else will have access to this list. In addition, findings will be reported in group form so individuals cannot be identified.

You are being asked to voluntarily give your opinion on the statements. By completing them, you will be giving your consent to participate in this study. You may choose not to answer some or all of the questions, if you so desire. Whatever you decide, your job will not be affected in any way. You may ask questions at any time during this study. My telephone number is: (602) 760-0821 or you can leave a message at the ROTC detachment at the University of Arizona DSN 361-4351 or (602) 621-3521 and I will call you back.

Thank you for your participation in this study.

Mary Ann Solano

Mary Ann Solano, Major, USAF, NC

APPENDIX C

DEMPSTER PRACTICE BEHAVIORS SCALE

University of Hawaii at Manoa

School of Nursing
[illegible]

August 30, 1992

Mary Ann Solano
4880 N. Sabino Canyon Rd #16172
Tucson, AZ 85715

Dear Mary Ann:

Please excuse the delay in my response to your recent letter. I had been traveling and just recently returned to Hawaii.

I am pleased that you would like to use the DPBS and do grant permission. Enclosed is a copy of the instrument and information on tool development and validity and reliability. Scoring for the DPBS is as follows: Reverse score items 8, 13, 26, 28
Sum all responses
Range of scores 30-150
Higher scores indicate greater extent of behaviors related to autonomy in practice

I am currently working on revision of a manuscript for publication related to the DPBS. In the meantime, following is the dissertation citation for the instrument development:

Dempster, J. S. (1990). Autonomy in practice: Conceptualization, construction and psychometric evaluation of an empirical instrument. [University of San Diego]. Dissertation Abstracts International, 51, 3320A (University Microfilms No. 9030752).

Your proposed study sounds interesting and I will look forward to learning about your findings. Please feel free to contact me if you need further information. My office phone is 808-956-8799. Best wishes as you work towards your degree.

Cordially,

Judith S. Dempster, DNSc, RNC, FNP

Instructions:

The following items represent opinions about your nursing practice. Please respond to each item. It is very important that you give your honest opinion. Carefully read each statement. Circle the response that best indicates TO WHAT EXTENT, that is, how much each of the following statements is TRUE for you in YOUR NURSING PRACTICE.

Key: 1 = Not at all true
2 = Slightly true
3 = Moderately true
4 = Very True
5 = Extremely true

IN MY PRACTICE I ...

1...	have a sense of self-achievement.....	1	2	3	4	5
2...	self-determine my role and activities.....	1	2	3	4	5
3...	.....	1	2	3	4	5
4...	THE REMAINING SECTION	1	2	3	4	5
5...	LEFT BLANK TO PROTECT	1	2	3	4	5
6...	COPYRIGHT	1	2	3	4	5
7...	.....	1	2	3	4	5
8...	.....	1	2	3	4	5
9...	.....	1	2	3	4	5
10..	.....	1	2	3	4	5
11..	.....	1	2	3	4	5
12..	.....	1	2	3	4	5
13..	.....	1	2	3	4	5
14..	.....	1	2	3	4	5
15..	.....	1	2	3	4	5
16..	.....	1	2	3	4	5
17..	.....	1	2	3	4	5
18..	.....	1	2	3	4	5
19..	.....	1	2	3	4	5
20..	.....	1	2	3	4	5
21..	.....	1	2	3	4	5
22..	.....	1	2	3	4	5
23..	.....	1	2	3	4	5
24..	.....	1	2	3	4	5
25..	.....	1	2	3	4	5
26..	.....	1	2	3	4	5
27..	.....	1	2	3	4	5
28..	.....	1	2	3	4	5
29..	.....	1	2	3	4	5
30..	.....	1	2	3	4	5

APPENDIX D

CONTROL OVER NURSING PRACTICE SCALE

Differentiated Group Professional
Practice in Nursing

THE UNIVERSITY OF
ARIZONA
HEALTH SCIENCES CENTER

College of Nursing
Tucson, Arizona 85721
(602) 626-2507

August 15, 1992

Mary Ann Solano, RN
Graduate Student
College of Nursing
University of Arizona
CAMPUS

Dear Ms. Solano:

I am most pleased that you have requested to use the Control Over Nursing Practice Scale as developed for and tested within the Differentiated Group Professional Practice in Nursing project. This new scale has been demonstrated to have internal consistency reliability and construct validity when used with registered nurses in staff positions in urban and rural hospitals. To date the scale has not been used with nurses employed in the military services. Therefore, I look forward to seeing the findings of your study of military nurses.

I must ask that you not publish the Control Over Nursing Practice Scale. However, if you so choose, you are welcome to include sample items so that your readers may see the nature of the content of the scale.

I wish you much success with your research project. Your study is most interesting and timely.

Sincerely,

Rose M. Gerber, PhD, RN
Associate Professor and
Co-Principal Investigator,
DGPP Project

Funded by an Award from the Division of Nursing
and the National Center for Nursing Research (1 U01 NR02153)

Instructions:

The following items represent opinions about your control over nursing practice in this hospital. Please respond to each item. It is very important that you give your honest opinion.

Carefully read each statement. Circle the response that best indicates your agreement or disagreement for each statement. The left set of numbers indicated degrees of disagreement. The right set of numbers indicates degrees of agreement. The center number means undecided. Please use it as little as possible. The more strongly you feel about the statement, the further from the center you should circle, with disagreement to the left and agreement to the right.

	Disagree						Agree
When working in this hospital I am FREE to:							
1... analyse problems critically.....	1	2	3	4	5	6	7
2... practice clinical skills to the best of my ability..	1	2	3	4	5	6	7
3...	1	2	3	4	5	6	7
4... THE REMAINING	1	2	3	4	5	6	7
5... SECTION LEFT BLANK	1	2	3	4	5	6	7
6... TO PROTECT	1	2	3	4	5	6	7
7... COPYRIGHT	1	2	3	4	5	6	7
8...	1	2	3	4	5	6	7
9...	1	2	3	4	5	6	7
10..	1	2	3	4	5	6	7
11..	1	2	3	4	5	6	7
12..	1	2	3	4	5	6	7
13..	1	2	3	4	5	6	7
14..	1	2	3	4	5	6	7
15..	1	2	3	4	5	6	7
16..	1	2	3	4	5	6	7
17..	1	2	3	4	5	6	7
18..	1	2	3	4	5	6	7
19..	1	2	3	4	5	6	7
20..	1	2	3	4	5	6	7
21..	1	2	3	4	5	6	7
22..	1	2	3	4	5	6	7
23..	1	2	3	4	5	6	7

APPENDIX E

GROUP COHESION SCALE

Directions:

Check the ONE response for each of the following six items which BEST describes your opinion about the colleague group (nursing staff on your unit/clinic) with whom you work:

1. I believe the *productivity* of this group is:

_____ Very much above average
_____ Above average
_____ Slightly above average
_____ Average
_____ Slightly below average
_____ Below average
_____ Very much below average

2. I believe the *efficiency* of this group is:

_____ Very much above average
_____ Above average
_____ Slightly above average
_____ Average
_____ Slightly below average
_____ Below average
_____ Very much below average

3. I believe the *morale* of this group is:

_____ Very much above average
_____ Above average
_____ Slightly above average
_____ Average
_____ Slightly below average
_____ Below average
_____ Very much below average

4. I believe the *feelings of belongingness* in this group is:

_____ Very much above average
_____ Above average
_____ Slightly above average
_____ Average
_____ Slightly below average
_____ Below average
_____ Very much below average

5. In terms of *personal feelings* about this group, I feel I:

_____ Like it very much
_____ Like it
_____ Like it slightly
_____ Neither particularly like or dislike it
_____ Dislike it slightly
_____ Dislike it
_____ Dislike it very much

6. In terms of *working together* with this group, I believe I:

_____ Enjoy it very much
_____ Enjoy it
_____ Enjoy it slightly
_____ Neither particularly enjoy or dislike it
_____ Dislike it slightly
_____ Dislike it
_____ Dislike it very much

Source: Good, L. R., & Nelson, D. A. (1973). Effects of person-group and intragroup attitude similarity on perceived group attractiveness and cohesiveness: II. Psychological Reports 33, 551-560.

APPENDIX F

ORGANIZATIONAL COMMITMENT QUESTIONNAIRE

Instructions:

Listed below are a series of statements that represent possible feelings that individuals might have about the organization for which they work. Please think about the Air Force (the organization that you work for) and indicate the degree of your agreement or disagreement with each statement by circling the corresponding number.

Key: 1 = Strongly disagree
2 = Disagree
3 = Slightly disagree
4 = Undecided
5 = Slightly agree
6 = Agree
7 = Strongly agree

	Disagree						Agree
1. I am willing to put in a great deal of effort beyond that normally expected in order to help the military be successful.....	1	2	3	4	5	6	7
2. I could just as well be working for a different hospital as long as the work was similar.....	1	2	3	4	5	6	7
3. For me, the military is the best of all possible organizations for which to work.....	1	2	3	4	5	6	7
4. I am proud to tell others that I am part of the military.....	1	2	3	4	5	6	7
5. Deciding to work for the military was a definite mistake on my part.....	1	2	3	4	5	6	7
6. I am extremely glad that I chose the military to work for over others I was considering at the time I joined.....	1	2	3	4	5	6	7

	Disagree						Agree
7. I talk up the military to my friends as a great organization to work for...	1	2	3	4	5	6	7
8. I really care about the fate of the military.....	1	2	3	4	5	6	7
9. Often, I find it difficult to agree with the military's rules and regulations on matters relating to its employees.....	1	2	3	4	5	6	7
10. I find that my values and the military's values are very similar.....	1	2	3	4	5	6	7
11. I feel very little loyalty to the military.....	1	2	3	4	5	6	7
12. It would take very little change in my present circumstances to cause me to leave the military.....	1	2	3	4	5	6	7
13. The military really inspires the very best in me in the way of job performance.....	1	2	3	4	5	6	7
14. There's not too much to be gained by sticking with the military indefinitely.....	1	2	3	4	5	6	7
15. I would accept almost any type of job assignment in order to keep working for the Air Force.....	1	2	3	4	5	6	7

Source: Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. Journal of Vocational Behavior, 14(2), 224-247.

APPENDIX G

INDEX OF WORK SATISFACTION OF HOSPITAL NURSES SCALE

Instructions:

Listed and briefly defined on this sheet of paper are six terms or factors that are involved in how people feel about their work situation. Each factor has something to do with "work satisfaction." I am interested in determining which of these is most important to you in relation to the others.

Please read the definitions for each factor as given below:

1. **Pay** - dollar renumeration and fringe benefits received for work done.
2. **Autonomy** - amount of job-related independence, initiative, and freedom either permitted or required in daily work activities.
3. **Task Requirements** - tasks or activities that must be done as a regular part of the job.
4. **Organizational Policies** - management policies and procedures put forward by the hospital and nursing administration of this hospital.
5. **Interaction** - opportunities presented for both formal and informal social and professional contact during working hours.
6. **Professional Status** - overall importance or significance felt about your job, both in your view and in the view of others.

These factors are presented in pairs on the next page. Only 15 pairs are presented, this is every set of combinations. No pair is repeated or reversed.

For each pair of terms, decide which one is more important for your job satisfaction or morale. Please indicate your choice by a check on the line in front of it. For example: If you feel that Pay (as defined above) is more important than Autonomy (as defined above), check the line before Pay.

__✓__ Pay or _____ Autonomy

I realize it will be difficult to make choices in some cases. However, please do try to select the factor which is important to you. Please make an effort to answer every item.

1. __	Professional Status	or __	Organizational Policies
2. __	Pay	or __	Task Requirements
3. __	Interaction	or __	Organizational Policies
4. __	Professional Status	or __	Task Requirements
5. __	Task Requirements	or __	Organizational Policies
6. __	Pay	or __	Autonomy
7. __	Professional Status	or __	Interaction
8. __	Professional Status	or __	Autonomy
9. __	Interaction	or __	Task Requirements
10. __	Interaction	or __	Pay
11. __	Autonomy	or __	Task Requirements
12. __	Autonomy	or __	Organizational Policies
13. __	Pay	or __	Professional Status
14. __	Interaction	or __	Autonomy
15. __	Pay	or __	Organizational Policies

Instructions:

The following items represent statements about satisfaction with your occupation. Please respond to each item. It may be very difficult to fit your response into the seven categories; in that case, select the category that comes closest to your response to the statement. It is very important that you give your honest opinion.

Please circle the number that most closely indicates how you feel about each statement. The left set of numbers indicates degrees of disagreement. The right set of numbers indicates degrees of agreement. The center number means "undecided." Please use it as little as possible. For example, if you strongly disagree with the first item, circle 1; if you moderately agree with the first statement, you would circle 6.

		Disagree						Agree
1.	What I do on my job does not add up to anything really significant.....	1	2	3	4	5	6	7
2.	There is no doubt whatever in my mind that what I do on my job is really important.....	1	2	3	4	5	6	7
3.	It makes me proud to talk to other people about what I do on my job.....	1	2	3	4	5	6	7
4.	Physicians at this hospital understand and appreciate what the nursing staff does.....	1	2	3	4	5	6	7
5.	The present rate of increase in pay for nursing service personnel at this hospital is not satisfactory.....	1	2	3	4	5	6	7
6.	There is a lot of teamwork between nurses and doctors on my own unit.....	1	2	3	4	5	6	7

	Disagree						Agree
7. There is a good deal of teamwork and cooperation between various levels of nursing personnel on my service.....	1	2	3	4	5	6	7
8. There is a great gap between the administration of this hospital and the daily problems of the nursing service.....	1	2	3	4	5	6	7
9. I have all the voice in planning policies and procedures for this hospital in my unit that I want.....	1	2	3	4	5	6	7
10. I have sufficient time for direct patient care.....	1	2	3	4	5	6	7
11. I think I could do a better job if I didn't have so much to do all the time.....	1	2	3	4	5	6	7
12. Excluding myself, it is my impression that a lot of nursing service personnel at this hospital are dissatisfied with their pay.....	1	2	3	4	5	6	7
13. I could deliver much better care if I had more time with each patient.....	1	2	3	4	5	6	7
14. There is a lot of "rank consciousness" on my unit, nursing personnel seldom mingle with others of lower ranks.....	1	2	3	4	5	6	7
15. The nursing personnel on my service do not hesitate to pitch in an help one another out when things get in a rush.....	1	2	3	4	5	6	7

	Disagree						Agree
16. New employees are not quickly made to "feel at home" on my unit.....	1	2	3	4	5	6	7
17. From what I hear from and about nursing service personnel at other hospitals, we at this hospital are being fairly paid.....	1	2	3	4	5	6	7
18. There is ample opportunity for nursing staff to participate in the administrative decision making process.....	1	2	3	4	5	6	7
19. The nursing personnel on my service are not as friendly and outgoing as I would like.....	1	2	3	4	5	6	7
20. I wish the physicians here would show more respect for the skill and knowledge of the nursing staff.....	1	2	3	4	5	6	7
21. There are not enough opportunities for advancement of nursing personnel at this hospital.....	1	2	3	4	5	6	7
22. The nursing administrators generally consult with the staff on daily problems and procedures.....	1	2	3	4	5	6	7
23. I have plenty of time and opportunity to discuss patient care problems with other nursing service personnel.....	1	2	3	4	5	6	7
24. The physicians at this hospital look down too much on the nursing staff.....	1	2	3	4	5	6	7

	Disagree						Agree
25. Administrative decisions at this hospital interfere too much with patient care.....	1	2	3	4	5	6	7
26. Considering what is expected of nursing service personnel at this hospital, the pay we get is reasonable.....	1	2	3	4	5	6	7
27. Physicians in general cooperate with nursing staff on my unit.....	1	2	3	4	5	6	7
28. An upgrading of pay schedules for nursing personnel is needed in the military.....	1	2	3	4	5	6	7
29. My present salary is satisfactory.....	1	2	3	4	5	6	7
30. Most people do not appreciate the importance of nursing care to hospital patients..	1	2	3	4	5	6	7
31. There is too much clerical and "paperwork" required of nursing personnel in this hospital.....	1	2	3	4	5	6	7
32. I feel that I am supervised more closely than is necessary.....	1	2	3	4	5	6	7
33. The nursing staff has sufficient control over scheduling their own shifts in this hospital.....	1	2	3	4	5	6	7
34. Nursing is a long way from being recognized as a profession.....	1	2	3	4	5	6	7
35. I feel I have sufficient input into the program of care for each of my patients.....	1	2	3	4	5	6	7

	Disagree						Agree
36. I have too much responsibility and not enough authority.....	1	2	3	4	5	6	7
37. On my service, my supervisor makes all the decisions. I have little direct control over my own work.....	1	2	3	4	5	6	7
38. I am satisfied with the type of activities that I do on my job.....	1	2	3	4	5	6	7
39. A great deal of independence is permitted, if not, required, of me.....	1	2	3	4	5	6	7
40. I am sometimes frustrated because all of my activities seemed programed for me....	1	2	3	4	5	6	7
41. I am sometimes required to do things on my job that are against my better professional nursing judgement.....	1	2	3	4	5	6	7
42. If I had the decision to make all over again, I would still go into nursing.....	1	2	3	4	5	6	7
43. My particular job really doesn't require much skill or "know-how".....	1	2	3	4	5	6	7
44. I have the freedom in my work to make important decisions as I see fit, and can count on my supervisors to back me up.....	1	2	3	4	5	6	7

Source: Stamps, P. L., & Piedmont, E. B. (1986). Nurses and work satisfaction: An index for measurement. Ann Arbor, MI: Health Administration Press Perspectives

APPENDIX H

ANTICIPATED TURNOVER SCALE

Instructions:

For each item below, circle the appropriate response.

Key: 1 = Disagree strongly
2 = Moderately disagree
3 = Slightly disagree
4 = Uncertain
5 = Slightly agree
6 = Moderately agree
7 = Agree Strongly

	Disagree						Agree
1. I plan to stay in my position awhile.....	1	2	3	4	5	6	7
2. I am quite sure I will leave my position in the foreseeable future.....	1	2	3	4	5	6	7
3. I know whether or not I will be leaving this agency with in a short time.....	1	2	3	4	5	6	7
4. Deciding to stay or leave my position is not a critical issue for me at this point in time.....	1	2	3	4	5	6	7
5. If I got another job offer tomorrow, I would give it serious consideration.....	1	2	3	4	5	6	7
6. I have no intentions of leaving my present position.....	1	2	3	4	5	6	7
7. I've been in my position about as long as I want to.	1	2	3	4	5	6	7
8. I am certain I will be staying here awhile.....	1	2	3	4	5	6	7
9. I don't have any specific idea how much longer I will stay.....	1	2	3	4	5	6	7

	Disagree						Agree
10. I plan to hang on to this job awhile.....	1	2	3	4	5	6	7
11. There are big doubts in my mind as to whether or not I will really stay in this agency.....	1	2	3	4	5	6	7
12. I plan to leave this position shortly.....	1	2	3	4	5	6	7

Source: Hinshaw, A. S., & Atwood, J. R. (1986). Anticipated turnover among nursing staff [Final report, Grant No. 1-RO1-NU00908]. Washington, DC: U. S. Department of Health and Human Services, Health Resources Administration, Bureau of Health Professionals, Division of Nursing

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