

INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

U·M·I

University Microfilms International
A Bell & Howell Information Company
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA
313/761-4700 800/521-0600

Order Number 1350782

**Professional nursing practice in hospitals: Those who stay, and
those who leave**

Simpson, Martha Jane, M.S.

The University of Arizona, 1992

U·M·I
300 N. Zeeb Rd.
Ann Arbor, MI 48106

PROFESSIONAL NURSING PRACTICE IN HOSPITALS:
THOSE WHO STAY, AND THOSE WHO LEAVE

by
Martha Jane Simpson

A Thesis Submitted to the Faculty of the
COLLEGE OF NURSING
In Partial Fulfillment of the Requirements
For the Degree of
MASTER OF SCIENCE
In the Graduate College
THE UNIVERSITY OF ARIZONA

1 9 9 2

STATEMENT BY AUTHOR

This thesis has been submitted in partial fulfillment of requirements for an advanced degree at The University of Arizona and is deposited in the University Library to be made available to borrowers under rules of the Library.

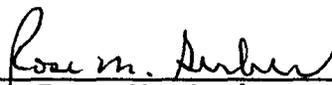
Brief quotations from this thesis are allowable without special permission, provided that accurate acknowledgment of source is made. Requests for permission for extended quotation from or reproduction of this manuscript in whole or in part may be granted by the head of the major department or the Dean of the Graduate College when in his or her judgment the proposed use of the material is in the interests of scholarship. In all other instances, however, permission must be obtained from the author.

SIGNED: _____



APPROVAL BY THESIS DIRECTOR

This thesis has been approved on the date shown below:



Rose M. Gerber

Associate Professor of Nursing

9-15-92

Date

ACKNOWLEDGMENTS

I gratefully acknowledge my thesis director, Dr. Rose M. Gerber, for her endless patience, encouragement, and support, and her expert guidance throughout the writing of this thesis. I also wish to acknowledge my committee members, Drs. Joyce Verran and Alice Longman, for their valuable input into this thesis. I wish to thank Paula Meek, Research Assistant, for always being willing to run the statistics "one more time," and Sylvia Sanders, Grant Secretary, for her cheerful support and willingness to help.

I gratefully acknowledge God's guidance in directing my endeavor from beginning to end. I have learned the truth of James 1:5. When I lacked wisdom, I asked of God, Who gives to all generously and without reproach, and He gave it to me time and time again.

Finally, I am most grateful to my family, Mary, Paul, and Erin, for their unfailing support, endless patience, and unwavering belief in my ability to succeed. Mom, thanks for instilling in me an appreciation for the value of education. You have been a good role model for me. And thanks Paul, for showing me how it's done.

TABLE OF CONTENTS

	Page
LIST OF ILLUSTRATIONS	6
LIST OF TABLES	7
ABSTRACT	8
1. INTRODUCTION	9
Introduction to the DGPP Model	12
Statement of the Problem	13
The Nursing Shortage	15
Increased Demand for Nurses	17
Decreased Supply of Nurses	19
Nursing Turnover	20
Purpose of the Study	21
Research Questions	22
Significance of the Study	22
Summary	23
2. THEORETICAL MODEL	25
Theoretical Model	25
Professional Nursing Practice	27
Organizational Commitment	31
Autonomy	35
Control Over Nursing Practice	39
Group Cohesion	41
Satisfaction	43
Turnover	48
Summary	53
3. METHODOLOGY	55
Methodology for DGPP Project	55
Setting	55
Sample	56
Protection of Human Subjects	56
Data Collection Protocol	57
Instrumentation	58
Methodology for Secondary Data Analysis	63
Research Design	63
Sample	63
Protection of Human Subjects	64
Data Collection	65
Data Analysis Plan	65

TABLE OF CONTENTS--Continued

	Page
Summary	66
4. RESULTS OF DATA ANALYSIS	68
Reliability Estimation	69
Demographic Characteristics	71
Comparison of Study Variables by t-Test	74
Discriminant Function Analysis	78
Results of Significance Testing	80
Results of Discriminant Analysis	82
Classification Results	84
Summary	87
5. INTERPRETATIONS, CONCLUSIONS, AND IMPLICATIONS	89
Interpretation of Findings Related to Research Question #1	89
Interpretation of Findings Related to Research Question #2	90
Organizational Commitment	91
Control Over Nursing Practice	92
Autonomy	92
Group Cohesion	93
Professional Nursing Practice as a Concept	93
Interpretation of Findings Related to Research Question #3	94
Interpretation of Additional Findings	95
Interpretation of Study Results	96
Study Limitations	98
Implications	98
Implications for Nursing Practice	98
Implications for Nursing Education	101
Recommendations	101
Summary	103
APPENDIX A: HUMAN SUBJECTS APPROVAL	105
REFERENCES	108

LIST OF ILLUSTRATIONS

Figure	Page
1. Theoretical Model: Influence of Professional Nursing Practice on Nursing Satisfaction and Turnover	26

LIST OF TABLES

Table		Page
1.	Identification of Concepts, Conceptual Definitions, and Instruments.	59
2.	Internal Consistency Reliabilities of Revised Scales Used in Primary Study (N = 365) . . .	60
3.	Internal Consistency Reliabilities of Revised Scales by Total Sample and by Stayers and Leavers (N = 171)	70
4.	Summary of Demographic Data (N = 171)	72
5.	Scales and Subscales t-Tests for Stayers and Leavers (N = 171)	75
6.	Means and Standard Deviations for Leavers, Grouped by Time to Termination (n = 44) . . .	79
7.	Discriminant Analysis: Results of Significance Testing (N = 167)	81
8.	Results of Discriminant Analysis (N = 167) .	83
9.	Discriminant Analysis: Classification Results (N = 167)	85

ABSTRACT

The purpose of this two-group, cross-sectional descriptive study was to compare self-reported professional practice indices and work satisfaction of hospital staff nurses who remained continuously employed within the institution ("stayers"; n = 127) and staff nurses who voluntarily terminated employment ("leavers"; n = 44). The data used for this secondary analysis were collected for the Differentiated Group Professional Practice in Nursing project (#U01-NR02153). Stayers reported significantly ($p \leq 0.05$) higher organizational commitment, control over nursing practice, satisfaction with nurse-to-nurse interactions, satisfaction with professional status, and autonomy. Significant differences ($p \leq 0.05$) in age, intent to remain within the community, employment status, and length of organizational tenure were also found. Discriminant analysis using indices of professional practice and work satisfaction was utilized to differentiate between stayers and leavers. Stayers were predicted with 92% accuracy and leavers with 33% accuracy. Investigation of misclassified leavers (n = 29) revealed no identifiable common personal or employment characteristics.

CHAPTER 1

INTRODUCTION

Acute care hospitals in the United States have been facing a shortage of registered nurses (RNs) in staff positions that is genuine, widespread, and of serious magnitude (McKibbin, 1990). While this shortage has impacted the entire health care industry, it has had a profound affect on general medical-surgical and critical care areas (Secretary's Commission on Nursing [SCON], 1988). Although often referred to as "acute", this shortage of qualified, professional staff nurses has actually ebbed and flowed since the 1950's, peaking in the mid- to late-1970's, early 1980's, and again from 1986 to the present (Buerhaus, 1987; Prescott, 1989). Stop gap measures such as increased wages and benefits have served to temporarily alleviate the crisis in the past but no lasting solutions to this shortage have been found. This limited availability of nursing resources in the face of a continually increasing demand for nurses affects the quality of patient care, the hospital work environment, and patient access to health services, as well as posing a problem of major societal concern (Moritz, Hinshaw, & Heinrich, 1989; SCON, 1988).

While some writers (Buerhaus, 1991; Ginzberg, Patray,

Ostow, & Brann, 1982; McKibbin, 1990) point to factors such as low wages, declining nursing school enrollments, and job related stress as the culprits in excessive nursing turnover and the nursing shortage, others (Aiken, 1990; Maraldo, 1991; Prescott, 1989) have suggested that the shortage is a result of hospital management policies, leadership practices, and the inefficient utilization of nursing resources. Prescott (1989) referred to this as a shortage not of professionals but of professional practice, alluding to the common hospital practice of using nursing manpower for tasks which could more productively be provided by support and ancillary services, while simultaneously limiting the scope of nurses' professional practice.

All members of the health care industry, including nurses, are being forced to identify those issues which negatively affect nursing and nurse satisfaction with bedside nursing, as well as those factors which reward and challenge the staff nurse and serve as incentives to remain at the bedside. The existence of "magnet hospitals" that attract and retain large numbers of staff nurses, even during critical shortages, attests to the fact that incentives to remain at the bedside can be successfully identified and implemented (Kramer & Schmalenberg, 1988a, 1988b; McClure, Poulin, Souvie, & Wendelt, 1982). Higher than expected turnover rates within hospitals are likely to

indicate larger problems within the organizations themselves (Wolf, 1981).

The Secretary of Health and Human Services established a Commission on Nursing in December 1987 to examine issues related to the recruitment and retention of RNs, develop recommendations on ways to address these problems, and implement both immediate and long-range solutions to enhance the adequacy of the supply of RNs. The year-long investigation resulted in 16 specific recommendations involving six central issues. Three of those issues (utilization of nursing resources, nurse decision-making, and the maintenance of nursing resources) related directly to the issue of professional practice (SCON, 1988). A challenge was issued to nursing leaders to develop alternative practice models, focusing on effective and efficient use of human resources in the health care system. The Differentiated Group Professional Practice (DGPP) in Nursing model (Verran, Murdaugh, Gerber, & Milton, 1988) is one such model. The DGPP project was designed to develop, implement, and evaluate the effect of an innovative professional practice model on work satisfaction and on retention and turnover of registered nurses.

Turnover among hospital nurses is increasingly linked to work satisfaction (Whaley, Young, Adams, & Biordi, 1989). Hinshaw, Smeltzer, and Atwood (1987), Price and Mueller

(1981a, 1981b), and Weisman, Alexander, and Chase (1981) suggested that job satisfaction plays an instrumental role in nursing turnover and retention. Aiken (1990) asserted that the most promising solution to the current nursing shortage lies in changing hospital practice environments and labor policies, which are linked to work satisfaction. Buerhaus (1991) proposed that increased work satisfaction could do what increased wages have not been able to do: ease the "dynamic shortage" of RNs. Hinshaw et al. (1987) proposed that nursing turnover might be reduced by granting nurses participation and autonomy in work-related decisions, thus increasing work satisfaction.

Introduction to the DGPP Model

The Differentiated Group Professional Practice (DGPP) in Nursing project (Verran et al., 1988), a federally funded cooperative agreement award (#U01-NR02153), was designed to address concerns related to professional practice, nurse satisfaction, and retention of registered nurses in acute care hospitals. The DGPP model is an innovative, unit-based nursing practice model with three major components: group governance, differentiated care delivery, and shared values in a culture of excellence. Based on previous research, these components were hypothesized to influence professional practice and nurse satisfaction with practice, which in turn

was expected to influence retention and turnover. The DGPP model is being implemented and evaluated in 10 medical-surgical and intensive care units in four urban and rural hospitals in Arizona. An additional 10 medical-surgical and intensive care units in four urban and rural hospitals serve as comparison units. Baseline (Time 1) data were obtained in early 1989, prior to implementation of the DGPP model. Data were collected again in October, 1989 (Time 2) and October, 1990 (Time 3).

Statement of the Problem

Questions have arisen regarding the impact of nurses' work satisfaction on the decision to remain employed within the institution or to terminate employment with the institution. Price and Mueller (1981a, 1981b) and Seybolt, Pavett, and Walker (1978) noted significant differences in satisfaction between nurses who stayed and nurses who left, particularly those factors dealing with professional issues such as autonomy and the chance to make full use of one's abilities. Pooyan, Eberhardt and Szigeti (1990) noted significant differences in turnover intention based on professional issues such as autonomy and participation opportunities, and satisfaction with promotion and supervision. Prestholdt, Lane, and Matthews (1988) reported that stayers were more "satisfied that their present

position provided them with the rewards associated with the practice of nursing" than leavers, who believed these rewards could best be found in another nursing position (p. 146). Prescott and Bowen (1987) determined that 50% of nurses who resigned indicated that changes in hospital practices, notably factors related to nursing autonomy, communication, and educational opportunities, could have induced them to stay.

Given the increasing interest in the differences between stayer and leavers, this secondary analysis was designed to explore the differences between stayers and leavers at the beginning of the original DGPP project. Stayers were defined as staff nurses who were employed in the institution during baseline data collection and who had remained continuously employed within the institution throughout the first 20 months of the DGPP project. Leavers were identified as those staff nurses employed in the institution during baseline data collection and who voluntarily resigned from their positions during the 20 months of the study.

Secondary analysis of data is an effective, valid mode of inquiry that can contribute to knowledge development. Secondary analysis examines previously collected data by exploring previously unexamined dimensions, or using different organizations of the data or different statistical

analyses than those originally used (Burns & Grove, 1987). Although infrequently used in nursing research, social scientists have used secondary data analysis for many years, with solid results (Gleit & Graham, 1989; McArt & McDougal, 1985). McArt and McDougal (1985) advocated that secondary data analysis be used as a new approach to nursing research.

The Nursing Shortage

A nursing shortage exists when the supply of nurses is insufficient to meet the demand for nurses (SCON, 1988). One way to gauge a shortage is to track hospital RN vacancy rates, where the majority of nurses are employed. While an RN vacancy rate of 5% may be considered "full employment," a vacancy rate of 10% or higher constitutes a "serious" shortage. In the years 1986-1989, RN vacancy rates in U.S. hospitals were 11%, 11.3%, 10.6%, and 12.7%, respectively. Historically, nursing shortages have spanned three years or less; the current shortage is in its sixth year and represents a more persistent and prolonged shortage of nurses, differing significantly from past shortages (McKibbin, 1990).

The number of nurses employed in nursing has never been greater. Contrary to popular opinion, nurses have not been leaving the profession in droves (Aiken, 1990). In 1988, more than 2.03 million nurses held RN licensure; of these,

an all-time high of 1.6 million, or 80%, were employed in nursing. Of these nurses, 68% were employed in hospitals (McKibbin, 1990). Yet in 1987, 85% of hospitals in the United States reported nursing shortages (Ulrich, 1987), with 19% of hospitals reporting severe shortages (SCON, 1988); in 1987, 10 to 32% of hospitals were forced to temporarily limit elective hospital admissions due to nurse shortages (SCON, 1988).

Buerhaus (1991) described the current shortage as a "dynamic," or economic, shortage. A dynamic shortage occurs when demand increases and employers seek to hire additional employees at the prevailing wage, but there are no workers available at that wage. This concept is closely related to "wage elasticity of supply," or the responsiveness between changes in wages and labor supply (Buerhaus, 1991). Buerhaus concluded that substantial increases in RN wages would result in temporary increases in the supply of RNs; however, due to hospitals' financial constraints and the ever increasing demand for nurses, this gain would be difficult to maintain. The author recommended that an alternative method of increasing wage elasticities could focus on work satisfaction. Thus, RNs who derive higher levels of work satisfaction would proportionately increase hours worked in response to wage increases and thus help ease the shortage.

Increased Demand for Nurses

Increased demand for nurses, rather than decreased supply, clearly "represents the single most pronounced cause of the current shortage of nurses" (McKibbin, 1990, p. 15). Both historical and demographic factors have contributed to an increased demand for nurses. The widespread availability of health insurance after World War II increased public accessibility to health care, while the Hill-Burton Act of 1947 expanded the number of hospitals (Buerhaus, 1987). The advent of Medicare and Medicaid in 1965 increased health care accessibility for the poor and elderly (McKibbin, 1990). Labor-intensive critical care units flourished during the 1960's, requiring even greater numbers of nurses (Buerhaus, 1987). All of these factors worked to increase the number of hospital admissions and inpatient days, bringing a greater demand for nursing care.

More recently, concern over rising hospital expenditures led to the Prospective Payment System (PPS) in 1983 (SCON, 1988). While PPS reduced the average length of patient stay by 9%, it effectively increased patient acuity, patient turnover, and nursing workloads (Dobson, 1987; Prescott, 1989). Although the overall demand for acute care fell by 50 million inpatient days between 1981 and 1986 (Aiken, 1990), patient acuity continued to increase precipitously. Nurse to patient ratios increased from 50

nurses per 100 patients in 1972 (Moran, 1988), to 61.4 nurses per 100 patients in 1977, to 98.0 nurses per 100 patients in 1988 (American Hospital Association, 1988).

The most significant demographic factor contributing to the increased demand for nurses is the aging of the country's population (SCON, 1988). The elderly often present with severe, chronic health conditions or multiple disease processes, requiring intensive nursing and medical intervention. The elderly represent the most rapidly increasing segment of the population. The number of Americans over 65 years of age will double, and the number of "frail elderly" (over 85) is expected to triple during the next 30 years, placing an extraordinary burden on the health care system (McKibbin, 1990).

Advances in medical technology, heightened expectations of the public, the advent of new diseases such as Acquired Immunodeficiency Disease (AIDS), and the discovery of new treatments have increased the intensity of nursing care required by many patients (SCON, 1988). The trend towards all-RN staffing has compounded the increased need for nurses. In some cases, hospitals have downsized by replacing support and assistive personnel with versatile and relatively cheap nurses (SCON, 1988), using nurses to perform numerous non-clinical tasks (Manthey, 1989). Concurrently, the decision-making authority of the nurse has

been restricted (Prescott, Phillips, Ryan, & Thompson, 1991). This inefficient and ineffective use of an already scarce resource has acted to further artificially inflate the demand for nurses (Prescott, 1989).

Decreased Supply of Nurses

The primary cause of the current nursing shortage is the increased demand for nurses (SCON, 1988). However, a decrease in the supply of nurses and potential nurses compounds the problems associated with the shortage. The decreased supply of nurses is the result of a combination of influences. Beginning in 1978, fewer individuals were choosing to go into nursing. The women's movement opened up to women careers conventionally held by men, drawing women away from traditionally female professions such as nursing (McKibbin, 1990). The maturing of the "baby boom" generation, the large number of individuals born between 1946 and 1960, resulted in a declining population of young people, further shrinking the pool of potential nursing students (Cowan, 1991). Additionally, historically low nursing wages have served to draw promising nursing students away from nursing and into better paying careers (McKibbin, 1990).

Some experienced hospital nurses are choosing to pursue careers away from the bedside, or outside of the health care

industry. An improperly functioning "captured" labor market has resulted in compression of nursing wages; the average maximum salary is \$7,000 higher than the average starting salary (Cowan, 1991). This lack of compensation for skill and experience provides little incentive for experienced nurses to remain in nursing (Prescott, 1989).

Dissatisfaction with low wages, expanding workloads, and unacceptable working conditions in many hospitals contributes to job hopping and high turnover rates among experienced nurses (Hinshaw et al., 1987; McKibbin, 1990). Prestholdt et al., (1988) reported that 80% of staff nurses who resigned their current positions planned to continue professional nursing careers in other organizations. In a descriptive study done by Prescott and Bowen (1987), 89% of "leavers" continued employment, in some capacity, in other institutions. While these nurses remain within the nursing profession and do not directly contribute to the shortage of nurses, excessive turnover further compounds problems associated with the shortage (Prescott & Bowen, 1987).

Nursing Turnover

Nursing turnover constitutes a major problem within hospitals. Excessive turnover impacts patients' access to care, the quality and safety of patient care, the success of new programs and services, and staff morale. Excessive

turnover also consumes inordinate amounts of financial and human resources (Hinshaw & Atwood, 1983; Jolma, 1990).

Turnover rates are calculated using various methods. The most common method is the crude turnover rate, which renders an annual volume of turnover. Nursing turnover rates in acute care hospitals average 30-50% across the country (Blegen & Mueller, 1987), with some specialties and geographic areas reporting turnover rates of 60 to 200% (Helmer & McKnight, 1989). The financial costs related to turnover include separation costs, recruitment, selection, placement, and training costs, lost time and productivity, and overtime pay for filling staffing gaps (Price, 1977; Whaley et al., 1989). The cost of recruiting and orienting one RN ranges from \$2,000 to \$10,000 (Jolma & Weller, 1989) to as high as \$20,000 for highly specialized nurses (SCON, 1988).

Purpose of the Study

There were two purposes in doing this secondary analysis. The first purpose was to describe differences between stayers and leavers relative to selected indices of professional practice and work satisfaction. The second purpose was to describe which predictor variables most clearly distinguished between stayers and leavers. Stayers were defined as those RNs who remained continuously employed

within the hospital during the first 20 months of the DGPP project. Leavers were defined as those RNs who voluntarily left employment within the first 20 months of the DGPP project.

Research Questions

The three research questions to be answered were:

1. How did work satisfaction in staff nurses who remained employed in hospitals differ from those who left?
2. How did professional practice variables (organizational commitment, autonomy, control over nursing practice, and group cohesion) differ between those nurses who remained employed in hospitals and those nurses who voluntarily left?
3. How well did professional practice variables and work satisfaction predict stayers and leavers?

Significance of the Study

The relationships between elements of professional practice and nurse satisfaction, and between nurse satisfaction and turnover, have been extensively studied in the nursing literature. However, little research has been done on professional practice and its effect on turnover. To the extent that inadequacies in present nursing practice

models contribute to nursing turnover, and specific aspects of professional practice increase nurse satisfaction, and potentially retention, appropriate measures to address the nursing shortage lie within the control of the nursing profession, and hospitals (Parasuraman, 1989). Changes in hospital practice environments and labor policies to increase nurses' autonomy, participation in decision-making, and control over nursing practice have the potential to increase work satisfaction, decrease turnover, and stabilize the nursing work force (Aiken, 1990; Hinshaw et al., 1987).

Summary

Evidence of a dynamic, demand-based nursing shortage exists. While the origins of this shortage are many, one key to its management lies in the appropriate utilization of professional nurses and the management of excessive nursing turnover rates. The DGPP in Nursing project was designed to implement a professional practice model and evaluate the relationship between professional practice, nurse satisfaction, and turnover.

Previous studies have noted differences in various indices of professional practice and work satisfaction among nurses remaining employed in hospitals and those voluntarily resigning. There were two purposes in doing this secondary analysis. The first purpose was to describe differences

between stayers and leavers relative to selected indices of professional practice and work satisfaction. The second purpose was to describe which set of predictors most clearly distinguished between stayers and leavers. Stayers were defined as those RNs who remained continuously employed within the hospital during the first 20 months of the DGPP project. Leavers were defined as those RNs who voluntarily left employment within the first 20 months of the DGPP project. Understanding the link between professional practice, nurse satisfaction, turnover, and retention is a vital step in managing the nursing shortage through the introduction of professional practice models.

Chapter 2

THEORETICAL MODEL

The theoretical model for this secondary analysis of data derives from the primary study, Differentiated Group Professional Practice (DGPP) in Nursing (Verran et al., 1988). Chapter Two consists of a review of the literature related to the constructs and concepts presented in the original proposal, as well as the concept of turnover. Every effort is made throughout the discussion to remain consistent with the concepts presented in the original DGPP study.

Theoretical Model

The theoretical model (Figure 1) for this secondary analysis consists of construct, concept, and operational levels. At the more abstract level are the constructs of professional nursing practice, nurse satisfaction, and nurse turnover. At the concept level, professional nursing practice is indexed as organizational commitment, autonomy, control over nursing practice, and group cohesion. Nurse satisfaction and turnover are indexed as work satisfaction and actual turnover, respectively. The operational level incorporates measurements for each of the six concepts:

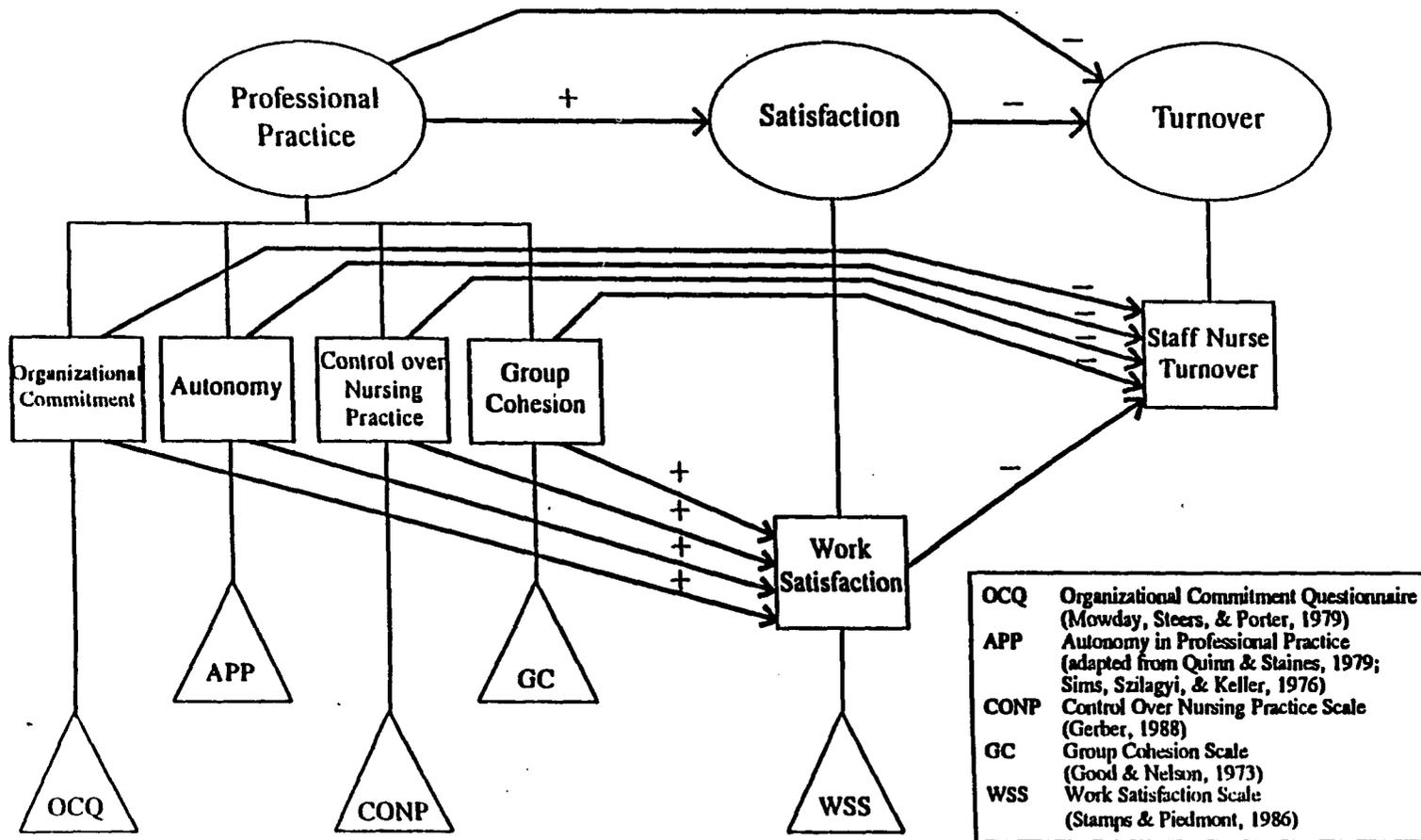


Figure 1: Theoretical Model: Influence of Professional Nursing Practice on Work Satisfaction and Turnover

organizational commitment, autonomy, control over nursing practice, group cohesion, work satisfaction, and turnover. The more abstract constructs of professional nursing practice, satisfaction, and turnover are presented. Each construct is followed by an examination of the related concepts. Operational definitions of the concepts are presented in detail in Chapter Three.

Professional Nursing Practice

Current literature points to the implementation of professional nursing practice models as a key to the survival and growth of the nursing profession (Manthey, 1989; Prescott, 1989; Wilcoxon, 1989). Professional nursing practice indicates autonomous, knowledge-based decision-making by nurses in matters relating to the practice of nursing (Prescott, 1989). Nursing leaders have long maintained that the restructuring of patient care delivery systems to promote greater autonomy and control over nursing practice in professional nursing practice issues is the key to controlling the nursing shortage (Maraldo, 1991). Present systems of patient care delivery compel nurses to operate below their professional potential (Prescott, 1989). Margretta Styles, President of the American Nurses' Association from 1986-1988, identified the right of nurses to practice to their full professional capabilities as one

of the critical issues facing the nursing profession (Ulrich, 1987).

Professional practice is defined in terms of responsibility, authority, autonomy, and accountability (Manthey, 1989; Prescott & Dennis, 1985). Professional responsibility is a charge for which one is answerable. Professional authority is the rightful, legitimate power to fulfill a responsibility (Batey & Lewis, 1982). Professional autonomy is the right of practitioners to be self-regulating and self-governing, to have control over their work-related functions (Maas, 1973), and involves independence and interdependence consistent with one's scope of practice (McKay, 1983). Professional accountability is being personally responsible and answerable to authority for one's professional actions (Maas, 1973). In the professional model, accountability and autonomy co-exist (Maas, 1973).

The key to professional practice lies in the empowerment of nurses. Strategic empowerment, a management philosophy widely discussed in almost every sector of industry in the United States, involves giving decision-making power to the people on an organization's front lines. In health care, the people on the clinical front lines are nurses (Maraldo, 1991). Empowerment decentralizes decision-making to the level of the staff nurse, and fosters

autonomous, knowledge-based practice to occur at the level at which care is given. As such, it is inextricably linked to quality (Manthey, 1989).

Professional nursing practice can be said to exist when responsibility for patient care, authority, or the power to effect change, and accountability for the outcome and quality of care, coexist (Manthey, 1989). Manthey (1989) asserted that "accountability should be a function of a system, and not a manifestation of character" (p. 15). Professional nursing practice allows nurses to become responsible for the quality of the nursing care delivered, and directly accountable to the patient for that care (National Commission on Nursing Implementation Project, 1987). Professional nursing care activities are "explicable and defensible in terms of scientific rationale" (Maas, 1973, p. 238).

Primary care nursing represented a step towards professional nursing practice by promoting continuity of care and decentralizing decision-making: the primary care nurse at the bedside, rather than the head nurse, made patient care decisions (Manthey, 1989). However, primary care nursing lacked true autonomy, and accountability often rested with nursing administration (Maas, 1973). Team nursing, on the other hand, fell short of professional practice by assigning shared, group responsibility for care

planning and delivery rather than individual responsibility. The avoidance of individual responsibility and accountability has been a problem in the past, and is a major obstacle to the professionalism of nursing practice (Manthey, 1989).

There has been a persistent belief in nursing that problem-solving, decision-making, accountability and control of issues that affect the staff nurse are best managed by educators and administrators in the administrative hierarchy rather than by the staff nurses themselves (Wilcoxon, 1989). This is inconsistent with the expectation that professionals not only seek to control their own practice and work environment (Hinshaw & Atwood, 1983), but have the professional right to exercise power over the practice of their discipline (Prescott & Dennis, 1985).

Hospitals are complex, formally structured bureaucratic systems that generally tend toward authoritarian control. Authoritarian control and professional autonomy are incompatible (Manthey, 1989). Empowerment of staff nurses acknowledges that staff nurses are capable of collectively managing themselves as well as their practice (Wilcoxon, 1989). Maintaining a balance between managerial control and strategic empowerment, and the closely related issue of position power versus expert power, are critical issues in the struggle over control of nursing practice (Manthey, 1989).

In times of financial constraints and nursing shortages, the power and resources of individual nurses and of nursing departments collectively are largely underdeveloped assets (Prescott & Dennis, 1985). In a study addressing the nursing shortage, Prescott (1989) declared that the greatest misutilization of nursing personnel was in the area of decision-making freedom regarding the practice of nursing. Nurses represent the largest single professional discipline of the health care delivery system, and the continued undervaluing and underutilization of their knowledge, skill and experience jeopardize both cost-containment (Prescott, 1989) and the quality of patient care (Hinshaw et al., 1987).

Verran et al., (1988) identified organizational commitment, autonomy, control over nursing practice, and group cohesion as components of professional nursing practice. In the following section each of these components is discussed.

Organizational Commitment

Organizational commitment, one of four concepts related to professional practice (Figure 1), has been identified repeatedly as an important variable in understanding employee work behavior. Organizational commitment involves a strong belief in and acceptance of the organization's

goals and values, a willingness to exert considerable effort on behalf of the organization, and a strong desire to maintain membership in the organization (Mowday, Steers, & Porter, 1979). In the original DGPP study, organizational commitment was defined as the relative strength of an individual's identification with, and involvement in, a particular organization (Mowday et al., 1979).

Organizational commitment goes beyond passive loyalty and involves an active relationship with the organization such that individuals are willing to give something of themselves in order to contribute to the organization's well-being. Organizational commitment has been described in terms of employee behaviors and attitudes. Commitment-related behaviors are overt manifestations of commitment in which employees choose, through their actions, to link themselves to the organization. Commitment-related attitudes, on the other hand, are indications of the extent to which the identity and goals of the organization and those of the employee are increasingly integrated or congruent, and to what extent the individual desires to maintain membership in order to facilitate these goals (Mowday et al., 1979). This latter concept is the concept embodied in the definition of commitment referred to in the primary study.

Level of commitment is thought to be related to

motivational force to perform. The theory surrounding commitment indicates that highly committed employees are less likely to leave their jobs and will perform at higher levels than less committed employees (Mowday et al., 1979).

Mowday et al. (1979) drew a clear distinction between organizational commitment and job satisfaction. As a construct, organizational commitment differs from job satisfaction in that organizational commitment is a more global response, reflecting an affective response to the organization as a whole. Organizational commitment focuses on the overall goals and values of the organization, whereas job satisfaction reflects the response to the actual job, or particular aspects of the job, and specific and tangible aspects of the work environment. Organizational commitment is slower to develop than job satisfaction, and is more stable over time (Mowday et al., 1979).

McCloskey and McCain (1987) examined organizational commitment, job satisfaction, and professionalism in newly employed nurses and found a correlation between job satisfaction and organizational commitment. Compared with other employees, nurses showed a lower degree of organizational commitment in their first year of work. The authors postulated that unmet job expectations resulted in a decline in satisfaction with the organization, the job, and the nursing profession.

Curry, Wakefield, Price, and Mueller (1986) studied the interaction of organizational commitment and job satisfaction over time in 508 women working in hospital nursing departments. Although the authors found that employees' perceptions of the organizational structure played an important role in both job satisfaction and organizational commitment, they found no evidence to support causal effects in either direction between job satisfaction and organizational commitment. Gerber, McNamara, Verran, Murdaugh, and Milton (1991), however, noted that organizational commitment positively affected total job satisfaction, as well as satisfaction with professional status, pay, organizational policies, and interaction with physicians.

Wakefield, Curry, Price, Mueller, and McCloskey (1988) explored the interactions between organizational commitment, job satisfaction and turnover in 772 hospital workers employed in various departments. The authors found relationships between labor intensity, specialization and job satisfaction, and between specialization and turnover, but found no significant differences in organizational commitment between departments, or in commitment and turnover.

In the evaluation of a causal model of turnover among hospital staff nurses Curry, Wakefield, Price, Mueller, and

McCloskey (1985) concluded that job satisfaction, organizational commitment, and intent to leave acted as intervening variables that mediated 13 determinants of turnover. Professionalism, organizational commitment, and intent to leave were also found to have statistically significant effects on turnover. The authors reported that higher levels of job satisfaction were associated with higher levels of organizational commitment, and that job satisfaction was the most important determinant of intent to stay within the institution. Intent to stay, as one dimension of organizational commitment, was one of the most important determinants of turnover (Price & Mueller, 1981a, 1981b).

Autonomy

The second concept related to professional practice, autonomy (Figure 1), is a key characteristic of professionalism. Professionals have legitimate power and authority to control the work, the content, and the regulation of the standards of their discipline (Prescott & Dennis, 1985; Price & Mueller, 1986). Hinshaw et al. (1987) defined autonomy as characteristics of a position that allow for individual decision-making in daily operational activities. Autonomy may also encompass the amount of job-related independence, initiative, and freedom which one is

given or is required to have in the performance of daily activities (Stamps & Piedmonte, 1986). In the original DGPP study, autonomy was defined as the perceived level of independence one had in the performance of one's job (Sims, Szilagyi, & Keller, 1976).

Hinshaw et al. (1987) reported that autonomy in one's professional practice is viewed as a "satisfier" to staff nurses, and correlates positively with retention of staff nurses. Orsolits (1984) demonstrated that dissatisfaction with participation in decision-making was a critical factor in professional nursing turnover. Weisman et al. (1981), in a longitudinal study of 1,259 nurses, found "sense of autonomy" to be the strongest predictor of job satisfaction. Dear, Weisman, Alexander and Chase (1982) likewise reported that sense of autonomy was the strongest determinant of job satisfaction among 1,102 intensive care unit (ICU) and non-ICU nurses.

Lack of participation in decision-making by workers leads to feelings of frustration and dissatisfaction with their jobs (Alexander, Weisman, & Chase, 1982). McCloskey (1990) advocated increased nurse autonomy as a way to better satisfy and retain nurses. Price and Mueller (1981b) ranked participation in making work-related decisions as the third most important determinant of nursing turnover. Based on the results of their study, the authors suggested that

nursing turnover could be reduced by the creation of professional career structures for staff nurses that incorporated successively greater amounts of professional rights and responsibilities.

Nurses differ significantly in their preference for professional autonomy and, therefore, in their response to autonomy. Dwyer, Schwartz, and Fox (1992), in a study involving 151 full-time RNs, focused on how, and to what extent, individual preferences for autonomy affected the relationship between perceived autonomy and job satisfaction. The authors found significant, positive relationships between the amount of decision-making autonomy nurses perceive at work, satisfaction with the work itself, and overall job satisfaction. The authors submit that as nurses' preference for decision-making autonomy increases, practices designed to promote nurse autonomy lead to greater job and work satisfaction. However, the authors cautioned that nurses with less preference for decision-making autonomy found increased demands for autonomy stressful and frustrating, thereby decreasing job satisfaction.

Staff nurses' perceptions of autonomy level are related to locus of control, management style of the head nurse, workload, and patient care delivery system (Alexander et al., 1982). Lewandowski and Kramer (1980) identified the ICU as a setting that permitted low patient to nurse ratios,

greater control over staffing, and flexible supervisory arrangements, which resulted in greater autonomy and independence when compared to nurses in non-ICU settings. Campbell (1986) noted a positive correlation between job satisfaction and participative management among coronary care unit nurses.

Research indicates that nurses leaving institutions perceive significantly less autonomy than nurses who choose to stay within the institution. Volk and Lucas (1991), in a study of 81 RNs employed in critical care units, reported that nearly one third of the variance in anticipated turnover could be attributed to the management style perceptions of the staff nurses. As nurses experienced a more participative approach to management, they were less likely to anticipate leaving their critical care positions. Seybolt et al. (1978) followed 242 nurses from a university hospital with an exceptionally high turnover rate and concluded that leavers in this sample were significantly more likely to report that "growth needs," such as the chance to make full use of their abilities, autonomy, recognition from supervisors, the opportunity to learn new things, and the opportunity to make independent decisions, were not being met on the job.

Control Over Nursing Practice

The third concept related to professional practice, control over nursing practice (Figure 1), refers to the individual nurse's "perceived freedom to evaluate and modify nursing practices, make autonomous decisions related to a patient's care, and influence the work environment and staffing at the unit level of organization" (Gerber, 1988, p. 3). Knowledge-based, autonomous practice occurring at the level at which care is given is the key to professional practice. Professional nursing practice cannot exist without the authority of the staff nurse to make patient care-related decisions at the point at which that care is given (Manthey, 1989).

In contrast to autonomy, control over nursing practice is "primarily an organizational factor that references the concept of centralization and the degree of decision-making allotted to individual staff members" in matters relating to patient care (Hinshaw et al., 1987, p. 10). In the original DGPP study, autonomy referenced the decision-making freedom of the nursing unit to make decisions related to working conditions and the practice of nursing, whereas control over nursing practice referenced the authority of the individual staff nurse to make decisions relating specifically to patient care issues (R. M. Gerber, personal communication, April 14, 1992). Although this distinction was made in the

DGPP study, many authors do not clearly distinguish between these related but distinct concepts, nor in the unit of analysis ("I am autonomous" as opposed to "we, as a group of nurses, are autonomous.")

Alexander et al., (1982) contended that increasing the amount of control nurses have over their practice is a first step toward promoting nurses' job satisfaction. Hinshaw et al., (1987) concurred, concluding that control over nursing practice within the institution was viewed as a "satisfier" to staff nurses, and was positively correlated with retention of staff nurses.

Prescott, Dennis, and Jacox (1987), examined nurses' satisfaction with their roles in clinical decision-making. Compared to nurses in specialty or intensive care units, general medical-surgical nurses reported significantly greater dissatisfaction with their involvement in decision-making. The authors attributed this, in part, to better physician-nurse communication which led to a greater role in clinical decision-making among specialty and critical care unit nurses.

Prestholdt et al. (1988) studied nurses who resigned from hospital staff positions and nurses who remained and reported that stayers were more likely to believe that their positions were interesting and challenging, and to report having a sense of worth and a feeling of accomplishment in

their positions. In addition, stayers were more likely to report that "they possessed the authority and autonomy to make decisions regarding patient care" in contrast to leavers, who did not share this feeling (p. 147).

Group Cohesion

Group cohesion, the fourth concept related to professional practice (Figure 1), refers to the extent to which employees have close friends in their immediate work area (Price & Mueller, 1986). In the original DGPP study, group cohesion was defined as the result of all forces influencing a member to stay in the group (Good & Nelson, 1973). Group cohesion is an organizational phenomenon, indicative of the level of integration an employee feels with the organization, and with colleagues (Hinshaw et al., 1987) and refers to both formal and informal social and professional interactions (Stamps & Piedmonte, 1986).

Group cohesion has been submitted as an important aspect of job satisfaction and turnover. In a study of blue collar workers, Price (1977) identified group cohesion as an organizational attribute which produced an indirect variation in turnover, through its effect on job satisfaction. Prestholdt et al., (1988) reported that nurses remaining employed within the hospital were more likely than nurses who terminated to describe their work

environment as generally positive, with mutual cooperation, teamwork, and respect among coworkers. Hinshaw et al. (1987) identified group cohesion as an important aspect of job satisfaction and an indicator of intent to stay within a hospital setting, particularly among baccalaureate nurses. Alternately, lack of team respect was found to be the major obstacle to job satisfaction. Gerber et al. (1991) found control over nursing practice and group cohesion had the greatest impact on total job satisfaction. However, when a causal model of satisfaction in hospital nurses was tested by Blegen and Mueller (1987), the proposed relationship between group cohesion and level of job satisfaction was not supported by the researchers' data.

Kramer and Schmalenberg (1988a, 1988b) conducted a study of 16 "magnet hospitals," modeled after the study done by McClure et al. (1982), in which the practices of hospitals distinguished for their ability to recruit and retain nurses were identified and analyzed. Kramer and Schmalenberg (1988b) reported that these institutions of excellence evidenced a true respect for the individual, and feelings by nurses of being members of an extended family.

McCloskey (1990) measured the effects of autonomy and social integration, or group cohesion, on job satisfaction in 320 newly employed nurses during the first, sixth, and 12th months of employment. The author found that nurses who

reported low autonomy and low group cohesion had less job satisfaction at one year than nurses who reported higher autonomy and/or group cohesion. Thus, higher amounts of one of the variables was reported to buffer lower amounts of the other. Group cohesion was particularly effective in buffering the detrimental effects of low autonomy. When newly employed nurses had both high autonomy and high social integration, they demonstrated more satisfaction, more organizational commitment, and more work motivation and intent to remain on the job than nurses with low autonomy and/or social integration. These results, however, related only to new hires from one institution, with relatively small samples at one year.

Satisfaction

Satisfaction can be viewed as the "degree to which members of a social system have a positive affective orientation toward membership in the system" (Price, 1977, p. 79). In the original DGPP study, the construct of work satisfaction was defined as the perceived enjoyment and perceived fulfillment of professional aspects of the activities performed for pay (Slavitt, Stamps, Piedmont, & Haase, 1978). Hinshaw et al. (1987) proposed the existence of two types of job satisfaction: organizational satisfaction and professional/occupational satisfaction.

Organizational satisfaction was described as the nurses' general feeling related to the work they were currently doing and reflected satisfaction with pay, professional status, administrative style, and interaction with colleagues. Professional (or occupational) satisfaction, on the other hand, relates to the nurses' perception of the quality of patient care delivered, the amount of time available to direct patient care activities, and general enjoyment of the position (Hinshaw et al., 1987).

An environment which supports professional nursing and the professional development of nurses will impact positively on nurse satisfaction (Verran et al., 1988). Among work-related variables, overall work satisfaction is one of the most frequently studied predictors of turnover and turnover intentions. Many authors conclude that a high level of work satisfaction results in increased employment tenure and decreased turnover (Hinshaw et al., 1987; Larson, Lee, Brown, & Shorr, 1984; Lemler & Leach, 1986; Price & Mueller, 1981a, 1981b; Taunton, Krampitz, & Woods, 1989).

Herzberg, Mausner, and Snyderman (1967) described a two-factor theory of motivation, or work satisfaction, in terms of intrinsic and extrinsic factors. Intrinsic factors are motivating factors, and refer to such things as achievement, promotion, responsibility, and recognition. Intrinsic factors are personal and highly variable; what may

satisfy one employee may not satisfy another. Extrinsic factors refer to organizational factors such as company policy, administration, supervision, working conditions, and pay. Intrinsic factors are generally thought to be greater sources of work satisfaction, while extrinsic factors are greater sources of work dissatisfaction. Stamps and Piedmonte (1986), however, reported that the two-factor theory is widely debated, and that research designed to test the theory has yielded inconclusive and inconsistent results.

Vroom's (1964) expectancy theory described work motivation in terms of employees' expectations and beliefs. Larson et al. (1984) surveyed 60 nurses to evaluate the extent to which job expectations and the importance the individual placed on various work conditions predicted current level of job satisfaction. The authors found that the degree and direction of change in job satisfaction were heavily influenced by individual expectations and the level of importance attached to particular factors. Using regression analysis of questionnaire responses, 55.9% of the variation in satisfaction ratings could be associated with the importance ratings; all 35 satisfaction variables were significantly predicted by respondents' job expectations and the importance they placed on working conditions. Based on these findings, the authors proposed that job satisfaction

occurs when an individual's needs and the characteristics of the job are compatible, and discrepancy between expectations and reality is minimized. The authors suggested that job autonomy and the ability to participate in decision-making are important factors relating to job satisfaction.

Price and Mueller (1981b) used longitudinal data on 1,091 RNs in seven hospitals to estimate a causal model of turnover in hospital nurses. The authors reported that despite the wide attention paid to job satisfaction in the literature, it was not found to have a significant net influence on turnover, but job satisfaction did serve as an important mediating variable, and as such it had a fairly large total effect on turnover. Four variables which significantly influenced job satisfaction were identified: routinization, or the amount of work variety; participation in work-related decision-making; communication related to the job; and promotional opportunity. The authors reported that participation in decision-making, while significant, did not produce a large influence on job satisfaction.

Nurses' job satisfaction influences client outcomes. In a study of 2,900 clients of 77 family planning clinics, Weisman and Nathanson (1985) reported that aggregate staff job satisfaction level was the strongest predictor of patient satisfaction with care. Furthermore, client satisfaction predicted the rate of client compliance.

Weisman, et al. (1981) reported a causal link between job satisfaction, autonomy, and nursing turnover. The authors described a strong, negative relationship between job satisfaction and intent to leave. The authors reported that "intrinsic work rewards (such) as increasing levels of responsibility and control within nursing practice" and increased autonomy over the content and scheduling of their work served as effective incentives to remain within a given hospital setting (p. 441).

In a study of 1,597 nurses, Hinshaw et al. (1987) reported that job satisfaction acted as a buffer between job stress and anticipated turnover. Wakefield et al. (1988) found that after controlling for occupation, work status, shift and tenure differences, nurses employed in labor-intensive units demonstrated a significantly higher level of satisfaction than general duty nurses. Weisman et al. (1981), in a longitudinal study of 1,259 nurses, found sense of autonomy to be the strongest predictor of job satisfaction. Dear et al. (1982) found no differences in level of job satisfaction or turnover in 1,102 ICU and non-ICU nurses but likewise reported that sense of autonomy was the strongest determinant of job satisfaction.

Turnover

Turnover is defined as the "degree of individual movement across the membership boundary of an organization" (Price & Mueller, 1986, p. 243). Turnover is characterized as voluntary (initiated by the individual) or involuntary (initiated by the organization). Because of the frequency of voluntary turnover and the possibility of its control by the organization, voluntary turnover has historically been the focus of turnover research (Price, 1977).

Excessive turnover hampers the move towards professional nursing practice. Price (1977) reported that increased turnover increased administrative staff size, degree of formalization, and centralization of decision-making, while concurrently decreasing innovation and satisfaction among employees. Group cohesion, social order, performance, and morale are also adversely affected by excessive turnover (Price, 1977).

Hospital nurses have traditionally demonstrated an exceptionally high turnover rate. A 1954 study of full-time professional nurses in 311 non-federal general hospitals revealed a 42% turnover rate; similarly, a 1962 study of 428 non-federal general hospitals described a 58% turnover rate among general duty nurses. The median turnover rate for professional and technical workers during that period was 13%, with a range of six to 37. Nursing turnover rates were

not included in these calculations as they represented the only extreme cases, and contributed disproportionately to turnover of professional and technical occupations (Price, 1977). More recently, nursing turnover rates have averaged 30 to 40% (Blegen & Mueller, 1987; Prescott & Bowen, 1987), with some specialties and geographic locations experiencing turnover rates of 60 to 200% (Helmer & McKnight, 1989). Excessive nursing turnover impedes both the health care industry and the delivery of quality patient care (Orsolits, 1984).

Hinshaw et al. (1987) proposed that turnover among hospital nurses could be reduced by granting nurses participation and autonomy in work-related decisions. Helmer and McKnight (1989), in a study of 1,500 Hawaiian nurses, reported that "a nurse's main source of job satisfaction comes from being a prime player on the health care team" (p. 78). The authors asserted that turnover of hospital nurses could be controlled by the creation of hospital environments that recognized the contributions of professional nurses.

A five-year study published by McClure et al. (1982) examined the practices of hospitals recognized as innovative and excellent institutions. These 41 so-called "magnet hospitals" exhibited extraordinary success in retaining and recruiting nurses, even during the most severe nursing

shortages. A bias for proactive action, autonomy, and particularly, decentralization of decision-making, were found to be major hallmarks of these institutions. Participative decision-making by professionals and shared governance, decentralized to the level of staff nurse at the clinical unit level, were found to have been major factors in helping these hospitals become institutions of excellence. Reporting on the success of these magnet hospitals, Trofino (1989) wrote that "both responsibility and authority are delegated down through the nursing hierarchy directly to the staff nurses at the clinical unit level" (p. 13).

Weisman et al. (1981) contended that the decision to leave an institution is a process, the "product of a predictable process in which both personal attributes of nurses and job-related attributes exert influences at various stages" (p. 440). The authors stated that restructuring staff nurse roles to incorporate successively greater amounts of autonomy is one approach to minimizing hospital turnover. Parasuraman (1988), in a study designed to test an integrated model of nursing turnover, noted that nursing turnover is the product of complex linkages among personal/demographic and organizational/job experience variables, as well as attitudinal variables, which contribute to the intent to leave the institution and

eventual turnover (p. 273). Personal/demographic and organizational/job experience variables were found to be directly related to the staff nurses' felt stress, job satisfaction and organizational commitment, and indirectly related to intent to leave.

Price has done extensive research on turnover in professional and semi-professional, predominately male, workers. In blue collar workers, organizational tenure, age, level of employment, and level of skill correlated strongly with turnover; education and manager/non-manager position correlated weakly with turnover. Although an immense amount of information has been collected regarding the role of gender and turnover, the results are inconclusive and contradictory (Price, 1977). Four determinants of turnover which have been weakly supported, but consistently related, to turnover are: routinization of work; professionalization; upward mobility; and perceived fairness of rewards (Price, 1977).

Based predominately on the findings from Price's (1977) previous work with blue collar workers, Price and Mueller (1981b) developed a causal model of turnover in nurses. This comprehensive, classic study of nursing turnover produced a model that, unfortunately, explained only 17% of the variance. Price and Mueller (1981b) identified five attributes of an organization which produced indirect

variations in nursing turnover through their effects on job satisfaction. These are: pay; group cohesiveness; instrumental (task-related) communication; formal (officially transmitted) communication; and degree of participation in the decision-making process. Satisfaction with the organization was found to be a mediating variable which produced variation in turnover. Intent to stay, the availability of alternative jobs, level of professional education, and job satisfaction were judged to be the greatest determinants of nursing turnover.

Much of the research on nursing turnover concurs that the best single predictor of actual turnover is turnover intention (Parasuraman, 1988; Price & Mueller, 1981a, 1981b; Seybolt, 1986). Price and Mueller (1981b) postulated that higher levels of job satisfaction increased intent to stay, which in turn reduced the likelihood of turnover. The authors found that while pay, participation in decision-making, routinization, and promotional opportunity impacted job satisfaction and intent to stay, they had either no direct effect on actual turnover, or effects too small to be meaningful. Job satisfaction was thought to affect turnover both directly and indirectly, through intent to stay.

Interestingly, higher than expected turnover rates have been identified in staff nurses in more advanced positions (Weisman et al., 1981), contrary to the assertion by Price

(1977) that advanced position, or a higher level of employment, had a negative affect on turnover. Weisman et al. (1981) reported that this may be due to the limited career opportunities available to nurses in advanced staff nurse positions, who tend to change jobs to enhance experience and career options.

Summary

Professional practice was described in terms of responsibility, authority, autonomy, and accountability. The restructuring of patient care delivery systems to empower and support staff nurses to give autonomous, knowledge-based patient care has been identified as central to professional nursing practice, and key to solving the nursing shortage. Literature was reviewed supporting the use of organizational commitment, autonomy, control over nursing practice, and group cohesion as legitimate indices of professional practice. The relationship between group cohesion and professional practice was weakly supported by the available literature.

The concept of work satisfaction was defined as the perceived enjoyment and perceived fulfillment of professional aspects of the activities performed for pay. Work satisfaction was noted to be a complex, multivariate concept, frequently studied as a predictor of turnover and

turnover intention. The impact of work satisfaction on turnover has been well supported by the literature.

Turnover was defined as a process culminating in voluntary separation from an organization. The adverse effects of excessive turnover on professional nursing practice were identified. Correlates and determinates in models of turnover were identified and discussed. The literature review identified important differences between stayers and leavers, and supported the concepts and predicted relationships within the theoretical model.

CHAPTER 3

METHODOLOGY

The setting, sample, protection of human subjects, data collection protocol, and instrumentation employed for the Differentiated Group Professional Practice (DGPP) in Nursing project, the primary study, are described in the first section of the chapter. The research design, sample, protection of human subjects, and plan for data collection for the secondary analysis are described in the second section. The plan for data analysis is then described.

Methodology for DGPP ProjectSetting

In the primary study, seven Arizona hospitals served as either demonstration or comparison sites for the DGPP project. One larger urban tertiary hospital was both a demonstration and a comparison site, providing three demonstration units and three comparison units. One urban and two rural hospitals also served as demonstration sites. A third urban hospital and two additional rural hospitals served as comparison sites. Except for the urban tertiary hospital which was a part of a university health sciences center, all other sites were community hospitals. For

purposes of the study, urban hospitals were defined as those within a metropolitan center or serving a population of 650,000 or greater. All rural hospitals were located in towns with populations of 35,000 or less and located at least 50 miles from the nearest metropolitan center.

Hospital sizes ranged from 55 to 256 beds, with reported annual patient occupancy rates ranging from 50% to 79%. Registered nurse full-time equivalents varied among hospitals from 36 to 372, with average RN vacancy rates ranging from 3% to 37% in the year prior to baseline data collection (Verran et al., 1988).

Sample

The sample for the primary study consisted of RNs employed in either full-time or part-time staff nurse positions. Only RNs from selected medical-surgical and critical care units were invited to participate in the study. The sample size was 365 RNs at Time 1 (baseline, February 1989) (Gerber et al., 1991).

Protection of Human Subjects

Subjects were invited individually and during group meetings to participate in the study on a voluntary basis. No potential risks to participants were identified in the primary study. The institutional review board of the

University of Arizona classified the study as having exempt status which allowed the use of a disclaimer (Appendix A). Completion and return of the questionnaire was accepted as consent to participate in the study.

Anonymity of participants was maintained through the use of assigned code numbers on all data forms. The master list of subjects was kept in a locked file in the project office with access limited to the research assistants. At no time were hospital administrators or personnel given access to the raw data.

Data Collection Protocol

Trained, on-site DGPP project staff members were used to distribute and collect staff nurse questionnaires at each of the demonstration and comparison hospitals. Staff nurses were encouraged to complete the questionnaire while on duty. Data collected in February, 1989, prior to implementation of the DGPP model, are referred to as Time 1, or baseline, data.

The questionnaire consisted of an eight page, double-sided, booklet containing a demographic data form and five Likert-type scales. Completed questionnaires were returned to investigators in sealed, unmarked envelopes. Data were entered into a computer by research assistants in the research office at the University of Arizona.

Instrumentation

The following section describes the original tools and the subsequent revisions used to operationalize the concepts in the primary study (Table 1) (Verran et al., 1988). The discussion includes psychometric properties of the tools used prior to their inclusion in the DGPP study, and subsequent findings.

Internal consistency reliabilities obtained in the primary study, using the revised tools, are presented in Table 2. With the exceptions of the autonomy scale and the satisfaction with organizational policies subscale, the scales and subscales used were estimated to have acceptable internal consistency reliabilities with alpha coefficients of .70 or greater; most alpha coefficients were .80 or greater. Construct validity of all scales was demonstrated repeatedly with both factor analysis and predictive modeling (Gerber et al., 1991).

The first concept, organizational commitment, was operationalized through the use of Mowday et al.'s (1979) Organizational Commitment Questionnaire (OCQ). The original scale consisted of 15 Likert-type items. The OCQ had a reported alpha reliability of 0.88 when used with hospital employees and acceptable levels of convergent, discriminant, and predictive validity (Mowday et al., 1979). The scale was revised to 13 items for the DGPP study, and had an alpha

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

Concept	Conceptual Definition	Instrument
Organizational Commitment	The relative strength of one's identification with, and involvement in, the organization	Organizational Commitment Questionnaire (Mowday, Steers & Porter, 1979)
Autonomy	Perceived independence in job performance	Autonomy in Professional Practice (adapted from Quinn & Staines, 1979; Sims, Szilagyi, & Keller, 1976)
Control Over Nursing Practice	The freedom to evaluate and modify nursing practice and to influence others	Control Over Nursing Practice Scale (Gerber, 1988)
Group Cohesion	Result of all forces influencing members to stay in the group	Group Cohesion Scale (Good & Nelson, 1973)
Nurse Work Satisfaction	Enjoyment and perceived fulfillment of professional aspects of the activity performed for pay	Work Satisfaction Scale (Stamps & Piedmont, 1986)

SOURCE: Verran, Murdaugh, Gerber, & Milton (1988).

Table 2. Internal Consistency Reliabilities of Revised Scales Used in Primary Study (N = 365).

<u>Scale/Subscale</u>	<u>N of items</u>	<u>Time 1 (N=365)</u>
Organizational Commitment	.13	.90
Autonomy	6	.67
Control Over Practice	21	.89
Group Cohesion	6	.83
Work Satisfaction (Total)	30	.85
Professional Status	4	.77
Time for Tasks	4	.82
Pay	6	.84
Nurse Interaction	5	.71
M.D. Interaction	5	.85
Organizational Policies	6	.69

SOURCE: Gerber, McNamara, Verran, Murdaugh, & Milton (1991).

reliability of 0.90 at Time 1 (Gerber et al., 1991).

The second concept, autonomy, was operationalized through the use of the Autonomy in Professional Practice (APP) scale, an instrument adapted from Sims et al.'s (1976) 6-item job characteristics subscale and Quinn and Staines' (1979) 6-item quality of employment scale. The adapted scale originally consisted of 10 Likert-type items, which was further revised to 6 items. The original instrument had a reported internal consistency alpha reliability estimated at 0.73 and a moderate construct validity using principal components factor analysis (Hinshaw & Atwood, 1986). In the DGPP study, the revised 6-item tool had an alpha reliability of 0.67 at Time 1 (Gerber et al., 1991).

The third concept, control over nursing practice, was operationalized through the use of Gerber's (1988) Control Over Nursing Practice (CONP) Scale, which was developed specifically for the DGPP project. The scale consisted of 21 Likert-type items. The items indicated control over various aspects of professional practice, including decision-making, planning of care, interaction with others, use of human resources, obtaining physical resources, and participation in staffing and scheduling. Gerber (1988) reported an internal consistency alpha reliability of 0.92 and moderate to strong construct validity for the instrument. In the DGPP study, this tool had an alpha

reliability of 0.89 at Time 1 (Gerber et al., 1991).

The fourth concept, group cohesion, was operationalized through the use of Good and Nelson's (1973) Group Cohesion (GC) Scale. The scale consisted of 6 Likert-type items. Hinshaw and Atwood (1986) used the instrument with hospital staff nurses and reported an alpha reliability of 0.81 and moderate construct validity using principal components factor analysis. In the DGPP study, the Group Cohesion Scale had an alpha reliability of 0.83 at Time 1 (Gerber et al., 1991).

The fifth concept, nurse work satisfaction, was operationalized through the use of Stamps and Piedmont's (1986) Work Satisfaction Scale (WSS). The original scale consisted of a 44-item Likert-type instrument with documented internal consistency reliability and construct validity. The WSS was revised to a 30-item instrument for use in the DGPP study. The revised WSS incorporated six subscales: satisfaction with professional status, time for tasks, pay, interaction with nurses, interaction with physicians, and organizational policies. Gerber et al., (1991) reported that in the DGPP study, the revised WSS had an overall alpha reliability of 0.85 at Time 1 (Table 2). The alpha reliabilities of the subscales were as follows: professional status: 0.77; time for tasks: 0.82; pay: 0.84; nurse interactions: 0.71; physician interactions: 0.85; and

organizational policies: 0.69.

Methodology for Secondary Data Analysis

Research Design

A two group, cross-sectional descriptive design was employed in this secondary analysis of data from the Differentiated Group Professional Practice (DGPP) in Nursing project. The two groups consisted of "stayers" and "leavers." Stayers were identified as those staff nurses who were employed in the institution during baseline data collection and had remained continuously employed within the institution at 20 months. Leavers were identified as those staff nurses employed in the institution during baseline data collection who voluntarily resigned their positions sometime during the 20 months of the study. Nurses who retired, were dismissed, or left for leaves of absences are not included in this study.

Sample

The sample for the secondary analysis included 171 subjects. There were 127 subjects in the stayer group and 44 in the leaver group. Criteria for inclusion in this analysis were:

1. Registered nurse licensure.
2. Employed as a staff nurse on one of the

demonstration medical-surgical and/or critical care units.

Stayers completed DGPP questionnaires at Time 1 (baseline) and remained employed within the institution for at least 20 months. Leavers completed DGPP questionnaires at Time 1, and were no longer employed within the hospital at the end of 20 months. Baseline data were defined as data obtained at the onset of the DGPP project and prior to implementation of the DGPP model.

Of the 171 subjects, 90% (n = 153) were female. The mean age of subjects was 36.4 years (sd = 8.2), with a range of 22 to 62 years. Sixty-six percent (n = 113) of the sample was married, 16% (n = 28) single, and 17% (n = 29) divorced or separated. The subjects' basic educational preparation consisted of associate degrees (52%; n = 89), baccalaureate degrees (27%; n = 45), and diploma certificates (21%; n = 36). Eighty-one percent (n = 137) of the sample worked full-time, while 19% (n = 33) worked part-time. The average length of employment within the institution was 4 years (sd = 3.9 years). Forty-two percent (n = 71) worked the day shift, 26% (n = 45) worked evenings, 23% (n = 39) worked nights, and 9% (n = 15) rotated shifts.

Protection of Human Subjects

Approval for this secondary analysis was granted by the

University of Arizona, College of Nursing, Human Subjects Committee (Appendix A). Protection of participants for this secondary analysis was addressed in the protection of human subjects' protocol for the primary study. No additional subjects were approached. No new risks were introduced by conducting the secondary analysis of data. Anonymity and confidentiality of participants were maintained in a fashion identical to the primary study.

Data Collection

Data collection for this secondary analysis consisted of baseline data obtained at the onset of the primary study. A research assistant employed by the University of Arizona, College of Nursing, and working with the DGPP project, selected data files from RNs working on medical-surgical and/or critical care units in the four hospitals. These files were transferred to a subdirectory for use by this investigator. On-site project coordinators were then contacted to verify continuous employment of responders and the current employment status of non-responders.

Data Analysis Plan

The data analysis plan addresses the following research questions:

1. How did work satisfaction in staff nurses who

remained employed in hospitals differ from those who left?

2. How did professional practice variables (organizational commitment, autonomy, control over nursing practice, and group cohesion) differ between those nurses who remained employed in hospitals and those nurses who voluntarily left?
3. How well did professional practice variables and work satisfaction predict stayers and leavers?

Descriptive statistics were used to describe the sample. Research questions 1 and 2 were answered through the use of t-tests. Question 3 was answered using discriminant analysis. Probability levels for statistical significance were set at $p \leq 0.05$.

Summary

The research methodology for both the primary study and the secondary analysis was reviewed. A two-group, cross-sectional descriptive design was used in this secondary analysis to examine the differences between nurses who remain employed within the hospital ($n = 127$) and those who voluntarily terminated employment ($n = 44$). Instrumentation and psychometric properties of the tools and the data collection protocol employed in the primary study were discussed. Criteria for inclusion of participants in the

secondary analysis were defined. Human subjects approval in this secondary analysis was waived due to the exempt status of the primary study. Last, the data analysis plan for the secondary study was outlined for the three research questions.

CHAPTER 4

RESULTS OF DATA ANALYSIS

The data are presented in four sections. The first section is a discussion of internal consistency reliabilities for all scales and subscales used in this secondary analysis. The second section is a discussion of the demographic characteristics of stayers, those staff nurses who remained continuously employed within the institution during the 20 months of the study, and leavers, those RNs who voluntarily resigned their positions sometime during the 20 months of the study. The third section addresses the similarities and differences in self-reported professional practice and satisfaction indices among stayers and leavers, including a comparison of the results of t-tests for stayers and leavers on the professional practice variables of organizational commitment, autonomy, control over nursing practice, group cohesion, and of work satisfaction and the work satisfaction subscales. The fourth section is a presentation of the results of the discriminant analysis performed to determine the relative influence of professional nursing practice and work satisfaction on stayers and leavers within this sample.

Reliability Estimation

Internal consistency reliability (α) estimates for all scales and subscales used in this secondary analysis were obtained by computing Cronbach's alpha. This computation was performed by using the Alpha model in the SPSS-X computer software (SPSS Inc., 1988). A standardized coefficient alpha reliability of ≥ 0.70 was accepted as an adequate measure of internal consistency (Cronbach, 1951). Internal consistency reliabilities were computed for the following scales: Organizational Commitment Questionnaire (Mowday et al., 1979); Autonomy Scale (Quinn & Staines, 1979; Sims et al., 1976); Control Over Nursing Practice (Gerber, 1988); Group Cohesion Scale (Good & Nelson, 1973); and Work Satisfaction Scale (Stamps & Piedmont, 1986).

Internal consistency reliabilities were computed for the entire sample, and then again separately for the stayer group and for the leaver group (Table 3). All scales and subscales were internally consistent at the level of $\alpha \geq 0.70$, with the exception of four scales: the autonomy scale ($\alpha = .64$) for the total sample, the autonomy scale ($\alpha = .62$) and satisfaction with nurse-to-nurse interactions ($\alpha = .68$) for the stayer group, and satisfaction with organizational policies ($\alpha = .67$) for the leaver group.

Table 3. Internal Consistency Reliabilities of Revised Scales by Total Sample and by Stayers and Leavers (N = 171).

Scale/Subscale	Total (N=171)	Stayers (n=127)	Leavers (n=44)
Organizational Commitment	0.91	0.89	0.89
Autonomy	0.64*	0.62*	0.71
Control Over Practice	0.88	0.89	0.84
Group Cohesion	0.85	0.85	0.82
Work Satisfaction (Total)	0.85	0.86	0.82
Professional Status	0.80	0.81	0.76
Time for Tasks	0.82	0.79	0.84
Pay	0.83	0.83	0.83
Nurse Interaction	0.70	0.68*	0.71
M.D. Interaction	0.85	0.84	0.87
Organizational Policies	0.70	0.71	0.67*

*Alpha Coefficient below criterion level of 0.70.

Demographic Characteristics

Chi-square (χ^2) and t-test statistics were performed to assess for significant differences in demographic data between RNs who stayed and those who left (Table 4).

Differences in gender and basic educational preparation were not significant. Females comprised 90% (n = 114) of the stayer group and 89% (n = 39) of the leaver group. Basic educational preparation of stayers and leavers were similar; 51% (n = 65) of stayers and 55% (n = 24) of leavers held associate degrees, 25% (n = 31) of stayers and 32% (n = 14) of leavers held baccalaureate degrees, and 24% (n = 30) of stayers and 14% (n = 6) of leavers held diplomas.

The stayer group was significantly older (t = -3.19; df = 167; p = 0.002), with a mean age of 37.4 years (sd = 8.6); the mean age of the leaver group was 32.9 years (sd = 6.1). Sixty-three percent (n = 80) of the stayers were married; 75% (n = 33) of the leavers were married, a statistically non-significant difference ($\chi^2 = 2.43$; df = 4; p = 0.66). However, there was a significant difference ($\chi^2 = 18.86$; df = 2; p < 0.000) in intent to remain within the immediate community between stayers and leavers. Eighty-six percent (n = 107) of stayers and 55% (n = 23) of leavers reported an intent to remain "long-term" within the community; 2% (n = 3) of stayers and 5% (n = 2) of leavers reported "moderate" intent to remain within the

Table 4. Summary of Demographic Data (N = 171).

<u>Demographic Characteristics</u>	<u>Stayers</u>	<u>Leavers</u>
Gender	N.S.	N.S.
Basic Educational Preparation	N.S.	N.S.
Age	↑	↓
Marital Status: Married	(↑)	(↓)
Intent to Remain	↑	↓
Employment Status: Full-time	↑	↓
Hospital Tenure	↑	↓
Shift Worked: Days	(↑)	(↓)
Shift Worked: Nights	(↓)	(↑)

↑ or ↓ = Significant difference at $p \leq 0.05$.

(↑) or (↓) = Non-significant difference; trend in data.

N.S. = Non-significant difference.

community; 11% (n = 14) of stayers and 41% (n = 17) of leavers reported "short-term" intent to remain within the community (Table 4).

There was a significant difference ($\chi^2 = 5.84$; $df = 1$; $p = 0.016$) in full-time versus part-time employment status between stayers and leavers (Table 4). Among stayers, 85% (n = 107) were employed full-time, 15% (n = 19) were employed part-time; among leavers, 68% (n = 30) were employed full-time, 32% (n = 14) were employed part-time. Stayers also had been employed within the hospital significantly longer ($t = -3.93$; $df = 168$; $p < 0.000$) than leavers, with stayers having been there an average of 4.8 years ($sd = 4.1$), while leavers had been employed 2.2 years ($sd = 2.7$). Although differences between stayers and leavers regarding shifts worked were not statistically significant, it is of interest to note that stayers had a slightly greater tendency to be employed on the day shift, while leavers had a greater tendency to be employed on the night shift: among stayers, 44% (n = 56) worked day shift, 28% (n = 35) evening shift, 18% (n = 23) night shift, and 10% (n = 12) rotated shifts; among leavers, 34% (n = 15) worked day shift, 23% (n = 10) evening shift, 36% (n = 16) night shift, and 7% (n = 3) rotated shifts.

The leaver group (n = 44) was further divided into three groups based on number of months from baseline data

collection to time of termination for purposes of examining for significant differences within the leaver group. Leaver Group 1 (n = 15) consisted of staff nurses who resigned from the institution within 6 months of baseline data collection. Leaver Group 2 (n = 15) consisted of staff nurses who resigned within 7 to 12 months of baseline data collection. Leaver Group 3 (n = 14) consisted of staff nurses who resigned within 13-20 months of baseline data collection. Chi-square, t-test, and analysis of variance of demographic data demonstrated the three leaver groups were similar with no significant differences in any of the characteristics reported above at the $p \leq 0.05$ level.

Comparison of Study Variables by t-Test

The mean scores for the professional practice variables of organizational commitment, autonomy, control over nursing practice, and group cohesion, as well as work satisfaction, were compared for stayers and leavers using the t-test statistic for independent groups. The means (\bar{x}), standard deviations (sd) and pooled variance estimates are presented in Table 5. Pooled, rather than separate, variance estimates are reported because the variances for the two groups were not significantly different for any variable. The level of significance was established at $p \leq 0.05$. Response options ranged from 1 (low) to 7 (high) for all

Table 5. Scales and Subscales t-Tests for Stayers and Leavers (N = 171).

Scale/Subscale	Stayers (n=127)		Leavers (n=44)		Pooled Variance Estimate		
	\bar{x}	sd	\bar{x}	sd	t Value	df	2-Tail Prob.
Organizational Commitment	4.99	1.00	4.13	1.09	-4.74	168	0.000*
Autonomy	5.20	0.79	4.86	0.91	-2.36	169	0.019*
Control Over Practice	5.11	0.79	4.74	0.67	-2.71	166	0.007*
Group Cohesion	5.20	1.03	4.93	0.93	-1.54	168	0.125
Work Satisfaction (Total)	3.93	0.72	3.63	0.65	-2.34	167	0.021*
Professional Status	6.25	0.80	5.86	1.00	-2.62	168	0.010*
Time for Tasks	3.17	1.35	3.14	1.47	-0.15	169	0.879
Pay	2.56	1.21	2.42	1.16	-0.67	169	0.506
Nurse Interaction	5.28	1.08	4.70	1.20	-2.97	169	0.003*
M.D. Interaction	3.73	1.30	3.32	1.36	-1.76	169	0.081
Organizational Policies	3.31	1.08	3.03	1.00	-1.49	168	0.138

NOTE: Response range of 1 (low) to 7 (high).

*Significant at $p \leq 0.05$.

items in scales and subscales.

As seen in Table 5, organizational commitment differed significantly between stayers and leavers at the $p < 0.001$ level ($t = 4.74$, $df = 168$). Stayers reported a mean level of organizational commitment of 4.99, ($sd = 1.00$); leavers reported a mean of 4.13 ($sd = 1.09$).

Significant differences ($t = 2.36$, $df = 169$, $p = 0.019$) for autonomy were noted between stayers and leavers (Table 5). Stayers reported a mean score of 5.20 ($sd = 0.79$), contrasted with leavers, who reported a lower mean of 4.86 ($sd = 0.91$).

Self-reported control over nursing practice differed significantly between stayers and leavers (Table 5). Stayers reported a higher level of control ($\bar{x} = 5.11$, $sd = 0.79$) than did the leavers ($\bar{x} = 4.74$, $sd = 0.67$). The t -value of -2.71 ($df = 166$) was significant at the 0.007 probability level.

Group cohesion was reported as $\bar{x} = 5.20$ ($sd = 1.03$) for stayers and slightly lower, $\bar{x} = 4.93$ ($sd = 0.93$), for leavers (Table 5). The difference in the means was not statistically significant ($t = -1.54$, $p = 0.125$).

As shown in Table 5, total work satisfaction also varied significantly between stayers and leavers at the $p = 0.021$ level ($t = -2.34$, $df = 167$). Nurses within the stayer group reported a mean work satisfaction level of 3.93

(sd = 0.72); for leavers the mean was 3.63 (sd = 0.65). Examination of the six satisfaction subscales revealed further differences between stayers and leavers. Even though both groups reported similar levels of group cohesion, stayers reported a higher level ($\bar{x} = 5.28$, sd = 1.08) of satisfaction with nurse-to-nurse interaction than did leavers ($\bar{x} = 4.70$, sd = 1.20) at the $p = 0.003$ level ($t = -2.97$, df = 169). Professional status was significantly more satisfying ($t = -2.62$, df = 168, $p = 0.010$) to stayers ($\bar{x} = 6.25$, sd = 0.80) than to leavers ($\bar{x} = 5.86$, sd = 1.00).

Satisfaction as measured by the remaining four subscales did not vary significantly between the two groups (Table 5). The mean score for satisfaction with time for task requirements was $\bar{x} = 3.17$ (sd = 1.35) for stayers, and $\bar{x} = 3.14$ (sd = 1.47) for leavers; for satisfaction with pay, $\bar{x} = 2.56$ (sd = 1.21) for stayers, and $\bar{x} = 2.42$ (sd = 1.16) for leavers; for satisfaction with nurse-to-physician interaction, $\bar{x} = 3.73$ (sd = 1.30) for stayers, and $\bar{x} = 3.32$ (sd = 1.36) for leavers; for satisfaction with organizational policies, $\bar{x} = 3.31$ (sd = 1.08) for stayers, and $\bar{x} = 3.03$ (sd = 1.00) for leavers.

As previously described, the group of leavers was divided into three groups based on the number of months from baseline data collection to time of termination for purposes

of examining for significant differences within the group. Analysis of variance among the three leaver groups again yielded no significant differences at the $p \leq 0.05$ level. Professional practice, work satisfaction, and work satisfaction subscale means and standard deviations for the three leaver groups are presented in Table 6.

Discriminant Function Analysis

Discriminant function analysis is a powerful statistical technique in which linear combinations of predictor variables are used to identify which variables are most related to which category (or group) of subjects, and based on the values of these variables, to predict into which category (or group) a subject falls (SPSS Inc., 1988). Discriminant function analysis allows the researcher to determine which set of predictors most clearly distinguish between groups, and how well group membership can be predicted based on the predictor variables (Munro, 1986). In this study, the professional practice indices and work satisfaction subscales comprised the predictor variables, and the categories (or groups) consisted of stayers and leavers. When samples with known group size are analyzed, as in this study, prior probabilities may be specified to produce classification coefficients (SPSS Inc., 1988). As 44 (25.7%) of the subjects were known to be in the leaver

Table 6. Means and Standard Deviations for Leavers, Grouped by Time to Termination (n = 44).

Scale/Subscale	Leaver Group 1 (n=15)		Leaver Group 2 (n=15)		Leaver Group 3 (n=14)	
	\bar{x}	sd	\bar{x}	sd	\bar{x}	sd
Organizational Commitment	4.30	1.25	3.91	1.07	4.20	0.97
Autonomy	4.47	1.07	5.11	0.82	5.00	0.70
Control Over Practice	4.74	0.77	4.74	0.71	4.75	0.54
Group Cohesion	4.84	1.07	5.01	0.89	4.94	0.89
Work Satisfaction	3.67	0.67	3.55	0.66	3.69	0.65
Professional Status	5.78	1.22	5.73	0.90	6.07	0.86
Time for Tasks	2.83	1.53	3.27	1.45	3.32	1.49
Pay	2.67	1.30	2.41	1.11	2.17	1.08
Nurse Interaction	4.58	1.38	4.69	1.25	4.83	0.98
M.D. Interaction	3.27	1.24	3.03	1.19	3.70	1.65
Organizational Policies	3.32	0.97	2.89	0.87	2.89	1.16

NOTE: Response range of 1 (low) to 7 (high).

Group 1 = 1-6 months
 Group 2 = 7-12 months
 Group 3 = 12-20 months

category and 127 (74.3%) in the stayer category, prior probabilities for classification analysis were set at 0.25 and 0.75. Cases with missing values for any of the predictor variables were excluded from the analysis. The number of functions extracted was set to equal one, the number of groups minus one (Munro, 1986). The Box's M test for equality of group covariance matrices ($M = 54.98$; $p = .669$) was not significant, indicating homogeneity of variances.

The four professional practice variables and the work satisfaction subscales were included in the discriminant function analysis. Total work satisfaction was not computed in the analyses due to the collinearity of total work satisfaction with the satisfaction subscales.

Results of Significance Testing

Wilks' lambda (Λ), a measure of the association between the independent and dependent variables (Munro, 1986), ranged from 0.877 to 0.999 (Table 7). The univariate F-ratio, a one way analysis of variance test for equality of group means on a single discriminating variable (SPSS Inc., 1988), ranged from 0.205 to 23.14 (Table 7). Significance testing suggested three scales and two subscales within the work satisfaction scale were statistically significant at the $p \leq 0.05$ level: organizational commitment ($p < 0.001$);

Table 7. Discriminant Analysis: Results of Significance Testing (N = 167).

Scale/Subscale	Wilks' Lambda	Univariate F-Ratio	Significance
Organizational Commitment	.877	23.14	<.001*
Autonomy	.967	5.59	.019*
Control Over practice	.955	7.84	.006*
Group Cohesion	.988	2.00	.159
Work Satisfaction Subscales			
Professional Status	.958	7.28	.008*
Time for Tasks	.999	0.20E-02	.964
Pay	.977	0.49	.487
Nurse Interaction	.955	7.76	.006*
M.D. Interaction	.987	2.21	.139
Organizational Policies	.985	2.44	.121

* Significant at ≤ 0.05 .

control over practice ($p = 0.006$); satisfaction with nurse interaction ($p = 0.006$); satisfaction with professional status ($p = 0.008$); and autonomy ($p = 0.019$).

Results of Discriminant Analysis

The results of the discriminant analysis are presented in Table 8 with the variables arranged in order of predictive strength. Discriminant analysis yielded standardized canonical discriminant function coefficients and a structure matrix. Standardized canonical discriminant function coefficients represent the relative importance of the independent variables with which they are associated. However, like beta weights, they tend to be unstable and should be interpreted with caution (Munro, 1986). Standardized canonical discriminant function coefficients ranged from 1.019 to -0.057 (Table 8).

The pooled within-groups correlation between the discriminant functions and the discriminating variables is displayed in the structure matrix in Table 8. Structure coefficients of ≥ 0.30 are considered meaningful and are used for interpretation of the discriminant functions (Munro, 1986). In order of decreasing predictive strength, the structure coefficients were: organizational commitment (.883); control over practice (.514); satisfaction with nurse interaction (.511); satisfaction with professional

Table 8. Results of Discriminant Analysis (N = 167).

<u>Scale/Subscale</u>	<u>Standardized Canonical Discriminant Function Coefficients</u>	<u>Structure Matrix</u>
Organizational Commitment	1.019	.883*
Control Over Practice	0.160	.514*
(SS) Nurse interaction	0.389	.511*
(SS) Professional status	0.040	.495*
Autonomy	0.013	.434*
(SS) Organizational Policies	-0.100	.287
(SS) M.D. Interaction	-0.110	.273
Group Cohesion	-0.488	.259
(SS) Pay	-0.162	.128
(SS) Time for tasks	-0.057	.008

NOTE: (SS) = Satisfaction Subscale within Work Satisfaction Scale.

*Significant at ≥ 0.30 .

status (.495); and autonomy (.434). That is, these five factors impacted significantly on predicting stayers and leavers.

Satisfaction with organizational policies, satisfaction with M.D. interactions, group cohesion, satisfaction with pay, and satisfaction with time for tasks had no statistically significant influence on whether subjects stayed or voluntarily left the organization. These factors did not prove useful in predicting stayers and leavers.

Classification Results

Results of the classification phase of discriminant analysis indicated that in order of decreasing strength of correlation, organizational commitment, control over nursing practice, satisfaction with nurse-to-nurse interaction, satisfaction with professional status, and autonomy correctly discriminated between stayers and leavers with an overall accuracy of 77% (Table 9). Stayers were more accurately predicted with a 92% (n = 114) correct prediction; leavers were correctly predicted 33% (n = 14) of the time. This ordering of predictor variables resulted in an overall Eigenvalue of 0.1799 (p = .003); Wilks' lambda was 0.848, $\chi^2 = 26.46$, df = 10.

The predictor variables resulted in an incorrect

Table 9. Discriminant Analysis: Classification Results
(N = 167).

<u>Actual Group Membership</u>	<u>Predicted as Stayers</u>	<u>Predicted as Leavers</u>
Stayers (n = 124)	92%* (n = 114)	8% (n = 10)
Leavers (n = 43)	67% (n = 29)	33%* (n = 14)

* Correctly Predicted.

classification of 8% (n = 10) of the 124 stayers, and 67% (n = 29) of the 43 leavers. Examination of the misclassified cases was undertaken to identify possible explanatory patterns in personal or employment characteristics. This was done ex post facto with incidental data. Of the 10 misclassified stayers (stayers who were predicted to have been leavers), at least three did indeed leave their units, however, they transferred to other departments within the hospital at sometime during the study period.

A systematic review of the 29 misclassified leavers (leavers who were predicted to have been stayers), did not reveal any identifiable patterns in relation to gender, age, marital status, commitment to remain within the community, full-time versus part-time employment status, shift worked, hospital tenure, hospital unit, or shift length. However, some were known to have relocated out of the immediate area; at least one became a full-time doctoral student and one completed a Master's program; several resigned soon after marrying; and a few resigned after having children. Thus, leavers appeared to have left for reasons other than those professional practice and work satisfaction variables identified in this study.

Summary

Estimates of internal consistency reliabilities were acceptable for all of the scales and subscales used in this secondary analysis. Chi-square and t-test analysis of demographic data demonstrated statistically significant differences ($p \leq 0.05$) in age, intent to remain within the community, employment status, and length of employment within the institution. Further analysis of the three leaver groups relative to time to termination uncovered no significant differences between the groups with regard to demographic data or employment characteristics.

Organizational commitment, autonomy, control over nursing practice, group cohesion, as well as work satisfaction and the work satisfaction subscales were compared and contrasted in stayers and leavers by use of χ^2 and t-tests. Stayers reported significantly ($p \leq 0.05$) higher organizational commitment, autonomy, control over nursing practice, total work satisfaction, satisfaction with professional status, and satisfaction with nurse interactions. Analysis of the three leaver groups again revealed no significant differences.

Discriminant analysis differentiated between stayers and leavers with 77% accuracy using professional practice indices and satisfaction subscales. Stayers were more accurately predicted (92%) than were leavers (33%).

Systematic review of the misclassified leavers suggested that while no demographic or employment variables were identified, mobility and kinship factors may have played a part in termination of employment.

CHAPTER 5

INTERPRETATIONS, CONCLUSIONS, AND IMPLICATIONS

The first purpose of this study was to describe differences between stayers and leavers relative to selected indices of professional practice and work satisfaction. The second purpose was to describe which predictor variables most clearly distinguished between stayers and leavers. The results of the data are discussed relative to each research question. Conclusions, implications for nursing practice, and recommendations are also addressed.

Interpretation of Findings Related toResearch Question #1

How did work satisfaction in staff nurses who remained employed in hospitals differ from those who left?

Stayers demonstrated a significantly greater total work satisfaction score than did leavers. More specifically, the stayer group reported somewhat higher mean scores for all six satisfaction subscales (professional status; time for tasks; pay; nurse-to-nurse interaction; physician interaction; and organizational policies). Statistically significant differences between stayers and leavers were observed with regard to satisfaction with

nurse-to-nurse interaction and satisfaction with professional status were statistically significant.

Satisfaction with nurse-to-nurse interaction and satisfaction with professional status had, respectively, the third- and fourth-most amount of predictive power with respect to turnover. That is, these two aspects of work satisfaction contributed significantly to the predictive power of the equation.

The finding of higher levels of work satisfaction in stayers than in leavers is consistent with previous studies of turnover (Hinshaw et al., 1987; Larson, Lee, Brown, & Shorr, 1984; Lemler & Leach, 1986; Price & Mueller, 1981a, 1981b; Seybolt, Pavett, & Walker, 1978; Taunton, Krampitz, & Woods, 1989). Verran et al. (1988) postulated that higher levels of professional practice would positively influence nurse's work satisfaction. The results of this investigation suggest that while total work satisfaction was significantly greater among stayers, satisfaction with nurse-to-nurse interaction and professional status were the most influential aspects of satisfaction as measured in this study.

Interpretation of Findings Related to

Research Question #2

How did professional practice variables (organizational

commitment, autonomy, control over nursing practice, and group cohesion) differ between those nurses who remained employed in hospitals and those nurses who voluntarily left?

Stayers demonstrated higher mean scores for all four of the professional practice variables. However, statistically significant differences between stayers and leavers were demonstrated with regard to organizational commitment, control over nursing practice, and autonomy.

Organizational Commitment

Organizational commitment had the greatest amount of predictive power relative to turnover in this study. The existence of higher levels of organizational commitment in stayers underscores Mowday et al.'s contention that more highly committed employees are less likely to leave their jobs than less committed employees. Curry et al. (1985) concluded that organizational commitment impacted on work satisfaction, resulting in increased intent to stay. The majority of organizational commitment research has focused on the relationship of organizational commitment and work satisfaction (Curry et al., 1985; Curry et al., 1986; Gerber et al., 1991; McCloskey & McCain, 1987); few studies, however, have explored the link between organizational commitment and actual turnover.

Control Over Nursing Practice

In this study, control over nursing practice had the second greatest amount of predictive power with consideration to staying and leaving. The finding that stayers evidenced higher levels of perceived control over nursing practice is consistent with conclusions drawn by Alexander et al. (1982) and Hinshaw et al. (1987) that increased control over practice is a "satisfier" for nurses, and correlated positively with staff nurse retention. This emphasizes Prestholdt's (1988) determination that stayers evidenced greater feelings of control regarding patient care decisions than did leavers.

Autonomy

In this study, autonomy was found to be the fifth greatest predictor of staff nurse turnover. Higher levels of autonomy among stayers concurs with findings by Hinshaw et al. (1987), McCloskey (1989), and Price and Mueller (1981b) that increased autonomy increased retention of staff nurses. Seybolt et al. (1978) noted that leavers were more likely than stayers to report unmet needs for autonomy and personal growth. Dear et al. (1982), Dwyer et al. (1992), and Weisman et al. (1981) reported significant correlations between autonomy and work satisfaction.

Group Cohesion

Group cohesion was somewhat higher in stayers than in leavers, although the difference was not statistically significant. This is notable in light of the finding that satisfaction with nurse-to-nurse interactions, a subscale of the Work Satisfaction Scale (Stamps & Piedmont, 1986), was the third-most predictive measure of turnover.

One might expect that satisfaction with nurse-to-nurse interaction and group cohesion would be related. However, in this study, nurse-to-nurse interaction reflected interpersonal relationships while group cohesion reflected unit or organizational factors. Prestholdt et al. (1988) described significant differences in group cohesion between stayers and leavers, while others (Gerber et al., 1991; Hinshaw et al., 1987; McCloskey, 1990; Price, 1977) reported differences in work satisfaction related to group cohesion. One explanation for the discrepancy in this study's findings may be that the Group Cohesion Scale as developed by Good and Nelson (1973) provided a measure of perceived group attractiveness rather than group cohesion per se.

Professional Nursing Practice as a Concept

Professional nursing practice as a concept had been proposed to include organizational commitment, control over practice, autonomy, group cohesion, and work satisfaction

(Verran et al., 1988). The finding of significantly higher means for organizational commitment, control over nursing practice, and autonomy that emerged among stayers was consistent with the findings of Hinshaw et al. (1987) and Aiken (1990) that participation in decision-making, control over nursing practice, and autonomy are "satisfiers" for nurses, and have the potential to decrease nursing turnover. This outcome is also consistent with Prescott and Bowen's (1987) finding that 50% of nurses who resigned indicated that changes in hospital practices related to nursing autonomy and organizational policies could have induced them to stay. Similarly, Pooyan et al. (1990), who examined turnover intention among nurses rather than actual turnover, noted significant differences in turnover intention based on professional issues such as autonomy, opportunities for participation and promotion, and satisfaction with supervision.

Interpretation of Findings Related to

Research Question #3

How well did professional practice variables and work satisfaction predict stayers and leavers?

Discriminant analysis was used to determine which combination of study variables most clearly distinguished between stayers and leavers, and to predict group membership

based on those variables. The professional practice and work satisfaction variables which differentiated between stayers and leavers were, in order of predictive strength, organizational commitment, control over nursing practice, satisfaction with nurse interactions, satisfaction with professional status, and autonomy. This ordering of study variables successfully predicted stayers and leavers in this sample with 77% overall accuracy. Stayers were predicted with 92% accuracy, leavers with 33% accuracy.

While more than nine out of ten stayers were accurately predicted, only one in three leavers could be identified using this equation. Two-thirds of the 44 leavers in this study could not be identified by self-reported professional practice indices or work satisfaction; other factors not specifically identified in this study may have played a part in the decision to terminate employment.

Interpretation of Additional Findings

Differences in demographic and personal characteristics were observed between stayers and leavers. Differences in age, intent to remain within the community, employment status, and hospital tenure were statistically significant. The group of stayers were four and one-half years older than the group of leavers, demonstrated a greater self-reported intent to remain within the community long-term, were more

likely to be employed full-time, and had been employed within the institution more than two and one-half years longer than the group of leavers. Trends in marital status and in shift worked, while not statistically significant, were also noted. Stayers were more likely than leavers to be married, and more likely to work the day shift rather than the night shift.

Analysis of the three leaver groups demonstrated no significant differences in indices of professional practice or work satisfaction. There were no differences noted among nurses terminating employment 1 to 6 months, 7 to 12 months, or 13 to 20 months after baseline data collection. This would suggest that differences between stayers and leavers may be present at least 20 months before leavers actually terminate employment with the hospital.

Interpretation of Study Results

The results of this study indicate that significant differences exist between staff nurses who remain employed within the institution and staff nurses who voluntarily resign from the institution. The group of stayers in this study, when compared to the group of leavers, consistently demonstrated higher self-reported indices of professional practice and satisfaction for every scale and subscale.

Differences in organizational commitment, control over

nursing practice, satisfaction with interactions with other nurses, satisfaction with professional status, and autonomy were significant enough to be useful in predicting stayers with 92% accuracy. However, these variables were only accurate in predicting 33% of leavers. Weisman et al. (1981), Curry et al. (1985), and Parasuraman (1989) noted the existence of determinates of turnover which are non-organizational and non-professional in nature. Hinshaw et al. (1987) noted that "mobility factors" such as age and kinship responsibilities contribute to staff nurses turnover, while Price and Mueller (1981b) identified kinship responsibilities and the location of family as determinates of turnover. Orsolits (1984) reported that 42% (n=279) of nurses with intentions to terminate employment cited personal reasons such as moving, family obligations, or return to school.

Of the 29 leavers in this study who were misclassified as stayers (that is, who were predicted to have stayed), resignation for personal reasons was a factor. Relocation, in response to either a job change or kinship responsibilities, continuing education, marriage, and children were some of the "mobility factors" noted for staff nurse turnover.

Study Limitations

Due to the nature of secondary analysis, limitations related to the interpretation of data must be noted. The original DGPP study was designed to develop, implement, and evaluate the effect of a professional practice model on work satisfaction and retention in registered nurses. Variables included in this study were limited to those demographic, professional practice, and work satisfaction variables identified in the original DGPP project. Additionally, data related to reasons for termination were not systematically collected for all subjects, which posed an unanticipated limitation on this secondary analysis.

Implications

Significant implications regarding the roles of professional nursing practice and work satisfaction are suggested from the findings of this study. Implications for both nursing practice and nursing education are presented.

Implications for Nursing Practice

The significance of the professional practice variables of organizational commitment, control over nursing practice and autonomy, and satisfaction with peer interactions and professional status is particularly intriguing in light of assertions by Aiken (1990), Maraldo (1991), and Prescott

(1989) that the current nursing shortage is a result of hospital management policies, leadership practices, and inefficient utilization of nursing resources, and Hinshaw et al.'s (1987) finding that increased nurse participation and autonomy could reduce turnover. This underscores Seybolt et al.'s (1978) observation that staff nurses' intent to leave stems from frustrated needs for growth and development on the job. Hospital practice environments and management policies may affect nursing turnover to the degree that they influence professional practice and work satisfaction. While not all turnover can, or should, be prevented, the rate of turnover may be influenced to the extent that factors affecting organizational commitment, control over nursing practice, autonomy, and work satisfaction can be identified and modified.

The findings from this study suggest significant implications for nursing practice. There is a need for hospital administrators to evaluate hospital organizational structure and its relationship to nurses' work satisfaction and professional practice. Hospital practices which inhibit nurses' commitment to the organization, control over nursing practice, peer interactions, professional status, and autonomy serve to fuel excessive nursing turnover. Alternatively, administrative practices which empower staff nurses and support professional practice serve to decrease

excessive turnover.

Study of the so-called "magnet hospitals" demonstrated that practices and values which foster organizational commitment, control over nursing practice, autonomy and satisfaction among staff nurses resulted in increased retention and decreased turnover. These practices and values included: decentralization, "a value of quality care, nurse autonomy, informal, nonrigid verbal communication, innovation, bringing out the best in each individual, value of education, respect and caring for the individual, and striving for excellence" (Kramer & Schmalenberg, 1988b, p. 17).

The finding that the group of leavers demonstrated decreased indices of professional practice and work satisfaction up to 20 months before actually terminating employment with the hospital is particularly significant for nursing administrators. Weisman et al. (1981) concluded that "nursing turnover may be viewed as the product of a predictable process in which both personal attributes of nurses and job-related attributes exert influence at various stages" (p. 440). McCloskey and McCain (1987) proposed that if hospitals met nurses' initial job expectations, or helped them form realistic expectations about their positions, nurses' work satisfaction could be increased and turnover decreased.

Implications for Nursing Education

The interpretation of the data in this study has implications for nursing education. The elements of professional practice and work satisfaction described in this study should be integrated throughout the nursing curriculum in professional schools of nursing. Students should be assisted in acquiring knowledge of hospital organizational structures that support and advance professional nursing practice. Such a framework allows the graduate nurse to candidly evaluate prospective employers and determine which ones provide the environment most likely to support the practice of professional nursing and an environment that promotes work satisfaction.

Recommendations

Several directions for further research are evident from the findings of this study. Expanding the focus of hospital turnover research to include other healthcare professionals such as social workers, physical therapists, and dieticians would be useful in gaining additional knowledge regarding professional practice, work satisfaction, and turnover. The current trend towards utilizing multi-purpose healthcare workers may influence staff nurses' opportunities to practice professional nursing; the impact of this trend on professional nursing

practice and work satisfaction has yet to be assessed.

Organizational commitment, having the greatest discriminating power between stayers and leavers, may warrant further research. As the greatest predictor of turnover in this study, continued investigation of the concept of organizational commitment may be useful. What are the determinates of organizational commitment? To what extent is organizational commitment a personal attribute and to what extent do hospital practices and policies influence it? To what extent do other variables such as education, work experience, organizational tenure, or turnover intention influence organizational commitment? Does the intention to leave an institution decrease an employee's perception of organizational commitment, or does decreased organizational commitment spark the intention to leave? Can interventions designed to increase organizational commitment be identified and implemented, with a corresponding increase in nurses' organizational commitment, and ultimately, retention?

Results of this study indicated that a large percentage (67%) of leavers were not predicted by professional practice variables or by satisfaction with peer interactions or professional status. Additional longitudinal studies of both neophyte and experienced nurses would be helpful to identify possible demographic and personal determinates of

turnover. Curry et al. (1985) noted that there has been little research related to kinship responsibility and its influence on turnover. More research may be needed in the area of kinship responsibility. To what extent does kinship responsibility, particularly child- and elder-care, influence turnover? Do institutions assisting with, or making provision for, child- or elder-care experience less turnover than institutions not providing such support?

Summary

The first purpose of this study was to describe differences between stayers and leavers relative to selected indices of professional practice and work satisfaction. The second purpose was to describe which predictor variables most clearly distinguished between stayers and leavers.

The finding that stayers consistently reported higher levels of professional practice and work satisfaction was consistent with previous studies. The finding of no significant differences in group cohesion was inconsistent with the literature. In order of predictive strength, organizational commitment, control over nursing practice, satisfaction with nurse-to-nurse interactions, satisfaction with professional status, and autonomy successfully predicted stayers and leavers.

Additional findings regarding age, marital status,

intent to remain within the community, employment status, hospital tenure, and shift worked were also noted between stayers and leavers. Differences in self-reported indices of professional practice and work satisfaction in leavers may have been apparent up to 20 months prior to termination of employment.

The findings of this secondary analysis were discussed in light of the available literature relating to professional practice, work satisfaction, and turnover among hospital nurses. Providing for nurses' needs related to organizational commitment, control over practice, autonomy, and work satisfaction through hospital management policies, leadership practices and the appropriate utilization of resources may indeed impact turnover. The support of professional practice and the empowerment of the bedside staff nurse has the potential to decrease turnover. However, demographic characteristics and "mobility factors" were found to also play a part in nursing turnover. Implications for nursing practice and nursing education were discussed and recommendations for further research were proposed.

APPENDIX A

HUMAN SUBJECTS APPROVAL

**THE UNIVERSITY OF ARIZONA**

TUCSON, ARIZONA 85721

COLLEGE OF NURSING

MEMORANDUM

TO: Joyce A. Verrran, PhD, RN

FROM: Linda R. Phillips, PhD, RN, FAAN^{LRP}
Director of Research

DATE: June 24, 1988

RE: Human Subjects Review: "Differentiated Group Professional Practice in Nursing"

Your project has been reviewed and approved as exempt from University review by the College of Nursing Ethical Review Subcommittee of the Research Committee and the Director of Research. A consent form with subject signature is not required for projects exempt from full University review. Please use only a disclaimer format for subjects to read before giving their oral consent to the research. The Human Subjects Project Approval Form is filed in the office of the Director of Research if you need access to it.

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

LRP/ms

College of Nursing

Tucson, Arizona 85721
(602) 626-6154

MEMORANDUM

TO: Martha Simpson, R.N., B.S.N.

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

DATE: March 11, 1992

SUBJECT: Human Subject's Approval for Thesis Research "Professional Nursing Practice in Hospitals:
Those Who Stay, and Those Who Leave"

Your research on the above entitled project, requires no further approval for secondary analysis of data as it has received prior approval as an exempt project.

Best wishes with your research.

LC/ga

REFERENCES

- Aiken, L. H. (1990). Charting the Future of Hospital Nursing. IMAGE: Journal of Nursing Scholarship, 22(2), 72-78.
- Alexander, C. S., Weisman, C. S., & Chase, G.A. (1982). Determinants of staff nurses' perceptions of autonomy within different clinical contexts. Nursing Research, 31(1), 48-52.
- American Hospital Association. (1988). Hospital statistics. Chicago, IL: American Hospital Association.
- Batey, M. V., & Lewis, F. M. (1982). Clarifying autonomy and accountability in nursing service: Part I. Journal of Nursing Administration, 12(9), 13-18.
- Blegen, M. A., & Mueller, C. W. (1987). A longitudinal analysis. Research in Nursing and Health, 10(4), 227-237.
- Buerhaus, P. I. (1987). Not just another nursing shortage. Nursing Economics, 5(6), 267-279.
- Buerhaus, P. I. (1991). Dynamic shortages of registered nurses. Nursing Economics, 9(5), 317-328.
- Burns, N., & Grove, S. K. (1987). The practice of nursing research: Conduct, critique and utilization. Philadelphia, PA: W. B. Saunders Co.
- Campbell, R. (1986). Does management style affect burnout? Nursing Management, 17(3), 38A-38H.
- Cowan, R. A. (1991). Demand for nurses requires quick action from hospitals. Healthcare Financial Management, 45(9), 24-25, 28.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. Psychometrika, 16(3), 197-333.
- Curry, J. P., Wakefield, D. S., Price, J. L., & Mueller, D. W. (1986). On the causal ordering of job satisfaction and organizational commitment. Academy of Management Journal, 29(4), 847-858.

- Curry, J. P., Wakefield, D. S., Price, J. L., Mueller, D. W., & McCloskey, J. C. (1985). Determinants of turnover among nursing department employees. Research in Nursing & Health, 8(4), 397-411.
- Dear, M. R., Weisman, C. S., Alexander, C. S., Chase, G. A. (1982). The effect of the intensive care nursing role on job satisfaction and turnover. Heart & Lung, 11(6), 560-565.
- Dobson, A. (1987). Medicare's prospective payment system: The impact on the U.S. health care system. In Proceedings of the Annapolis Symposium, November 6-7, 1986. Annapolis, MD: Blue Cross and Blue Shield Association.
- Dwyer, D. J., Schwartz, R. H., Fox, M. L. (1992). Decision-making autonomy in nursing. Journal of Nursing Administration, 22(2), 17-23.
- Gerber, R. M. (1988). Control over nursing practice scale: Development and testing. Unpublished report, University of Arizona, Tucson.
- Gerber, R. M., McNamara, A., Verran, J., Murdaugh, C., & Milton, D. (1991, October). Effect of professional practice on staff nurse satisfaction over time. Paper presented at the American Nurses' Association Council of Nurse Researchers International Nursing Research Conference, Los Angeles, CA.
- Ginzberg, E., Patray, J., Ostow, M., & Brann, E. A. (1982). Nurse Discontent: The search for realistic solutions. Journal of Nursing Administration, 12(11), 7-11.
- Gleit, C., & Graham, B. (1989). Secondary data analysis: A valuable resource. Nursing Research, 38(6), 380-381.
- 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.
- Helmer, F. T., & McKnight, P. (1989). Management strategies to minimize nursing turnover. Health Care Management Review, 14(1), 73-80.
- Herzberg, F., Mausner, B., & Snyderman, B. B. (1967). The motivation to work. New York: Wiley.

- Hinshaw, A. S., & Atwood, J. R. (1983). Nursing staff turnover, stress, and satisfaction: Models, measures, and management. In H. H. Werley & J. J. Fitzpatrick (Eds.). Annual Review of Nursing Research, 1, 133-53.
- Hinshaw, A. S., & Atwood, J. R. (1986). Anticipated turnover among nursing staff [Final Report, Grant #R01-NU00908]. Washington, D.C.: U.S. Department of Health and Human Services, Health Resources Administration, Bureau of Health Professions, Division of Nursing.
- Hinshaw, A. S., Smeltzer, C. H., & Atwood, J. R. (1987). Innovative retention strategies for nursing staff. Journal of Nursing Administration, 17(6), 8-16.
- Jolma, D. J. (1990). Relationship between nursing work load and turnover. Nursing Economics, 8(2), 110-114.
- Jolma, D. J., & Weller, (1989). An evaluation of nurse recruitment methods. Journal of Nursing Administration, 19(4), 20-24.
- Kramer, M., & Schmalenberg, C. (1988a). Magnet hospitals: Part I, Institutions of excellence. Journal of Nursing Administration, 18(1), 13-24.
- Kramer, M., & Schmalenberg, C. (1988b). Magnet hospitals: Part II, Institutions of excellence. Journal of Nursing Administration, 18(2), 11-19.
- Larson, E., Lee, P. C., Brown, M. A., Shorr, J. (1984). Job satisfaction: Assumptions and complexities. Journal of Nursing Administration, 15(1), 31-38.
- Lemler, S. F., & Leach, A. K. (1986). The effect of job satisfaction on retention. Nursing Management, 17(4), 66-68.
- Lewandowski, L. A., & Kramer, M. (1980). Role transformation of special care unit nurses: A comparative study. Nurse Researcher, 29(3), 170-179.
- Maas, M. L. (1973). Nurse autonomy and accountability in organized nursing services. Nursing Forum, 12(3), 237-259.
- Manthey, M. (1989). Control over practice: Who owns it? Nursing Management, 20(7), 14-16.

- Maraldo, P. J. (1991). Empowerment, not numbers, will end nursing shortage. Healthcare Financial Management, 45(9), 21-29.
- McArt, E. W., & McDougal, L. W. (1985). Secondary data analysis: A new approach to nursing research. IMAGE: Journal of Nursing Scholarship, 17(2), 54-57.
- McCloskey, J. C. (1990). Two requirements for job contentment: Autonomy and social integration. IMAGE: Journal of Nursing Scholarship, 22(3), 140-143.
- McCloskey, J. C., & McCain, B. E. (1987). Satisfaction, commitment and professionalism of newly employed nurses. IMAGE: Journal of Nursing Scholarship, 19(1), 20-24.
- McClure, M., Poulin, M., Souvie, M., Wendelt, M. (1982) Magnet hospitals: Attraction and retention of professional nurses. Kansas City, MO: American Nurses Association.
- McKay, (1983). Interdependent decision making: Redefining professional autonomy. Nursing Administration Quarterly, 7(4), 21-29.
- McKibbin, R. C. (1990). The nursing shortage and the 1990s: Realities and remedies. Kansas City, MO: American Nurses Association
- Moran, D. W. (1988, May 5). Nursing shortage: Are we fighting the last war? Hospitals, p. 17.
- Moritz, P., Hinshaw, A. S., & Heinrich, J. (1989). Nursing resources and the delivery of patient care: The National Center for Nursing Research perspective. Journal of Nursing Administration, 19(5), 12-17.
- Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. Journal of Vocational Behavior, 14, 224-247.
- Munro, B. H. (1986). Canonical correlation and discriminant function analysis. In B. S. Munro, M. A. Visintainer, & E. B. Page, Statistical Methods for Health Care Research (pp.320-333). Philadelphia: J. B. Lippincott.

- National Commission on Nursing Implementation Project. (1987). An introduction to timeline for transition into the future nursing education system for two categories of nurses and characteristics of professional and technical nurses of the future and their educational programs. Milwaukee, WI: National Commission on Nursing Implementation.
- Orsolits, M. (1984). Effects of organizational characteristics on the turnover in cancer nursing. Oncology Nursing Forum, 11(1), 59-63.
- Parasuraman, S. (1989). Nursing turnover: An integrated model. Research in Nursing & Health, 12(4), 267-277.
- Pooyan, A., Eberhardt, B. J., & Szigeti, E. (1990). Work-related variables and turnover intention among registered nurses. Nursing & Health Care, 11(5), 255-258.
- Prescott, P. A. (1989). Shortage of professional nursing practice: A reframing of the shortage problem. Heart & Lung, 18(5), 436-443.
- Prescott, P. A., & Bowen, S. A. (1987). Controlling nursing turnover. Nursing Management, 18(6), 60-66.
- Prescott, P. A., & Dennis, K. E. (1985). Power and powerlessness in hospital nursing departments. Journal of Professional Nursing, 1(6), 348-355.
- Prescott, P. A., Dennis, K. E., & Jacox, A. K. (1987). Clinical decision making of staff nurses. IMAGE: Journal of Nursing Scholarship, 19(2), 56-62
- Prescott, P. A., Phillips, C. Y., Ryan, J. W., & Thompson, K. O. (1991). Changing how nurses spend their time. IMAGE: Journal of Nursing Scholarship, 23(1), 23-28.
- Prestholdt, P. H., Lane, I. M., & Matthews, R. C. (1988). Predicting staff nurse turnover. Nursing Outlook, 36(3), 145-147.
- Price, J. L. (1977). The study of turnover. Ames, IA: Iowa State University Press.
- Price, J. L., & Mueller, C. W. (1981a). A causal model of turnover for nurses. Academy of Management Journal, 24(3), 543-565.

- Price, J. L., & Mueller, C. W. (1981b). Professional turnover: The case of nurses. New York: SP Medical and Scientific Books.
- Price, J. L., & Mueller, C. W. (1986). Handbook of organizational measurement. Cambridge, MA: Ballinger Publishing Company.
- Quinn R. P., & Staines, G. L. (1979). The 1977 quality of employment survey: Descriptive statistics with comparison data from the 1969-70 and 1972-73 surveys. Ann Arbor, MI: University of Michigan, Institute of Social Research.
- Secretary's Commission on Nursing. (1988). Final Report, Volume 1. Washington, DC: U.S. Department of Health and Human Services.
- Seybolt, J. W. (1986). Dealing with premature employee turnover. Journal of Nursing Administration, 16(2), 26-32.
- Seybolt, J. W., Pavett, C., & Walker, D. D. (1978). Turnover among nurses: It can be managed. Journal of Nursing Administration, 8(9), 4-9.
- Sims, H. P., Szilagyi, A. D., & Keller, R. T. (1976). The measurement of job characteristics. Academy of Management Journal, 19(2), 195-211.
- Slavitt, D. B., Stamps, P. L., Piedmonte, E. B., & Haase, A. M. (1978). Nurses satisfaction with their work situation. Nursing Research, 27, 114-120.
- SPSS Inc. (1988). SPSS-X user's guide (3rd ed.). Chicago: Author.
- Stamps, P. L., & Piedmont, E. B. (1986). Nurses and work satisfaction: An index of measurement. MI: Health Administration Press Perspectives.
- Taunton, R. L., Krampitz, S. D., & Woods, C. Q. (1989). Manager impact on retention of hospital staff: Part I. Journal of Nursing Administration, 19(3), 14-18.
- Trofino, J. (1989). Empowering nurses. Journal of Nursing Administration, 19(4), 13.

- Ulrich, B. (1987). An interview with Margretta M. Styles: Nursing today and a vision for the future. Nursing Economics, 5(3), 103-106, 117.
- Verran, J. A., Murdaugh, C., Gerber, R. M., & Milton, D. (1988). Differentiated Group Professional Practice in Nursing [Proposal]. Tucson: University of Arizona, College of Nursing. A cooperative agreement award (#U01-NR02153) funded by the National Center for Nursing Research, National Institutes of Health, and the Division of Nursing, Department of Health and Human Services, Washington, D.C., 1988-1993.
- Volk, M. C. & Lucas, M. D. (1991). Relationship of management style and anticipated turnover. Dimensions of Critical Care Nursing, 10(1), 35-40.
- Vroom, V. H. (1964). Work and motivation. New York: Wiley.
- Wakefield, D. S., Curry, J. P., Price, P. L., Mueller, C. W., & McCloskey, J. C. (1988). Differences in work unit outcomes: Job satisfaction, organizational commitment, and turnover among hospital nursing department employees. Western Journal of Nursing Research, 10(1), 98-105.
- Weisman, C. S., Alexander, C. S., & Chase G. A. (1981). Determinants of hospital staff nurse turnover. Medical Care, 19(4), 431-443.
- Weisman, C. S., & Nathanson, C. A. (1985). Professional satisfaction and client outcomes: A comparative organizational analysis. Medical Care, 23(10), 1179-1192.
- Whaley, B. A., Young, W. B., Adams, C. J., Biordi, D. L. (1989). Targeting recruitment efforts for increased retention. Journal of Nursing Administration, 19(4), 34-38.
- Wilcoxon, C. E. (1989). A return to the original Nightingale concept: Taking the hint. Journal of Nursing Administration, 19(3), 19.
- Wolf, G. A. (1981). Nursing turnover: Some causes and solutions. Nursing Outlook, 29(4), 233-236.