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Nurse manager competencies

Linda Kay Chase
University of Iowa

NURSE MANAGER COMPETENCIES

by

Linda Kay Chase

An Abstract

Of a thesis submitted in partial fulfillment of the
requirements for the Doctor of Philosophy degree in
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Thesis Supervisor: Associate Professor Sue Ann P. Moorhead

ABSTRACT

Building on a previous 1994 study, this descriptive study reflects on the ever-shifting sands of the nurse manager role. This national survey is based on the Katz (1955) conceptual framework of interrelated technical, human and conceptual competencies. An instrument developed by the investigator for determining important nurse manager competencies was validated using an expert panel of American Organization of Nurse Executive (AONE) Nurse Manager Fellows. The research used a web-based survey to collect information from hospital nurse managers who belong to AONE via a self-administered competency instrument. Eighty one completed the online survey with complete data for a response rate of thirteen percent.

Findings suggest the highest self-reported nurse manager competency ratings included effective communication, retention strategies, effective discipline and decision-making. In contrast, the lowest self-reported nurse manager competencies included nursing theory, case management and the research process.

Associations between competencies with individual and organizational variables were studied. The impact of organizational variables of hospital size and span of control had a medium effect. Magnet status impact was unremarkable. Individual variables of gender, age, education, tenure as an RN, and tenure in current position also did not significantly impact competency ratings. A large and medium effect was noted between tenure in the management role on all the competency ratings within the five constructs.

The Chase Nurse Manager Competency Instrument underwent psychometric testing as none had been done since the original 1994 study. Study data from 1994 and 2010 determined reliability and validity assessments with positive results. A crosswalk

was also completed between the Chase Instrument and the 2005 AONE Nurse Manager Leadership Collaborative Framework illustrating similar competency categories of focus.

Based on the findings the ten recommendations emerged; *Provide realistic expectations of the role; Provide a skill assessment and form a plan based on competency development; Provide a structured orientation and development program which includes 30/60/90 day checkpoints; Establish long term mentorship building on the key ingredients of inspiration and role modeling; CNO involvement is critical; Teach Influence; Teach implementation strategies; Create the culture; Invest in Nurse Manager support for Development of Staffing, Financial Acumen and Compliance; Enhance communication skills at every level.*

Among nursing leadership, the nurse manager role has been identified as critical in the provision of high-performing, effective and efficient care in the patient care delivery setting. This individual is responsible for quality, safety, satisfaction and financial performance in alignment with regulatory and accrediting body requirements. Excellence in horizontal and vertical communication is required as this role represents the voice of the direct care nurse at the leadership table as well as the voice of the board of trustees at the unit level.

Abstract Approved:

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Thesis Supervisor

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Title and Department

_____

Date

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Graduate College
The University of Iowa
Iowa City, Iowa

CERTIFICATE OF APPROVAL

PH.D. THESIS

This is to certify that the Ph. D. thesis of

Linda Kay Chase

has been approved by the Examining Committee
for the thesis requirement for the
Doctor of Philosophy degree in Nursing
at the December 2010 graduation.

Thesis Committee: _____
Sue Ann P. Moorhead, Thesis Supervisor

_____
Charmaine M. Kleiber

_____
Mary K. Clark

_____
Diane Huber

_____
Joe A. Gliem

To my parents (Rich and Norma Silhanek) who have always given me the ***gift*** of support for lifelong learning and reaching for my goals.

To my family (Steve, Ryan and Michelle Chase) and my sister (Carol Larson) who can now say that I have finished my educational goal- they are truly the ***gifts*** in my life.

Yesterday is history,
Tomorrow is mystery,
Today is a ***gift,***
And that is why
They call it the “present”

~~author unknown

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CHAPTER I

INTRODUCTION

Nurse managers can greatly influence the success of health care organizations because of their management role, especially at the unit level. During the past two decades, the nurse manager role has rapidly evolved into a position with greater authority and responsibility. This study helps to pinpoint the current knowledge and ability competencies important to this pivotal role based on the refinement of an instrument previously developed by the investigator. The initial research was conducted in 1994 by the investigator using the same instrument and was repeated in 2010 in order to compare results and make recommendations for contemporary nurse manager role development. The following quotes illustrate the importance of the nurse manager role in health care organizations.

"The role of the nurse manager is critical in the provision of effective and high quality care in any patient care delivery setting. This individual is actually the CEO of that clinical area. She or he is accountable and responsible for patient safety and quality. This includes all of the nurse sensitive indicators recognized by regulatory and accrediting bodies, patient satisfaction, and financial performance. In addition, the nurse manger represents the direct caregiver voice at nursing leadership decision-making tables." Linda Q. Everett, PhD, RN, NEA-BC, FAAN, executive vice president, chief nurse executive, Indiana University Health and past president, American Organization of Nurse Executives (AONE).

"It's the hardest job in health care right now", says Jane Shivnan, RN, executive director at the Institute for Johns Hopkins Nursing, Baltimore. *"This person has to advocate up to management for nurses and other staff, but also interpret and manage*

organizational decisions that come down to the unit," Shivnan says. *"Because nurse managers have such an immediate impact and such a far reach, they can influence everything from doctor satisfaction and patient length of stay to staff nurse turnover. As the demands of the job grow, many hospital leaders are making a subtle, yet important, change in the nurse manager's status by elevating the job title to "director."* She's talking about the ever complex nurse manager role which continues to evolve at breakneck speed.

"It's very challenging. You have to know about quality, patient safety, clinical practices, finances, and material and human resource management," says Karen Drenkard, RN, past vice president of nursing and chief nurse executive at Inova Health System, Falls Church, Virginal and current director of the Magnet Recognition Program. *"And you're on call 24 hours a day, seven days a week. Nurse managers have contact with nearly all departments of the hospital and are the bridge between staff nurses and upper management."*

With everything that is expected of nurse managers in this role, many hospitals are dedicating many resources to help them succeed, going well beyond traditional manager orientation. Some organizations provide special on-site training; some send nurses to programs offered by universities or professional groups; and some link nurses with mentors and support groups (Hudson-Thrall, 2006). These efforts emphasize the complex role of the nurse manager and the importance of organizations developing strong leaders for middle management. Another way that organizations are developing managers includes using fellowships and institutes to further develop the knowledge, skills and abilities essential for nurse manager's success. These provide networking

opportunities and often foster working in teams on capstone projects in order to develop, not only essential skill sets, but confidence in project management. Socialization and emotional intelligence development are also a focus of these groups and aim at providing novice managers negotiation and cultural awareness skills.

Excellent nurse leadership is vital to surviving and thriving in the nurse manager role. Excellent leaders must possess administrative confidence, appropriate educational preparation, skills to manage business deals, broad clinical expertise and a thorough understanding of leadership principles. In particular, nurse managers hold a pivotal role in linking the vision of the administration to actual clinical practice at the bedside.

Background and Significance

The nurse manager role is currently seen as one of the hardest, most complex roles in healthcare (Thrall, 2006). Sanders, Davidson, and Price (1996) emphasize that the nurse manager is responsible for translating strategic goals and objectives formulated at the operational level into practice; thus, the position of nurse manager requires an ability to interpret general concepts and integrate them into specific clinical and management performance, while simultaneously determining and monitoring outcomes. This nurse manager role is important because it is the direct link between the administrative mission and vision, and the direct care provider. In addition, the nurse manager role provides not only administrative and clinical leadership, but also has 24-hour accountability for all patient care activities on the unit (Beuchlin-Telutki, Bilak, Merrick, Reich, & Stein, 1993; Thrall, 2006). The role of the nurse manager in the acute care nursing area is pivotal in the development and retention of staff, as well as overall unit productivity. In total, the nurse manager has the responsibility to assure that the

mission of the organization is translated into everyday practice, while assuring the quality and efficiency of the daily operations of their unit.

This study focuses on the changes that have occurred in the nurse manager role due to the challenges in the healthcare environment specifically in the past two decades. Remarkably, the nurse manager role has become increasingly complex due to the shifting environment of health care delivery, largely due to the evolution of care that has occurred at the nursing unit-level. Tremendous transformation over the past decade includes management of increased complexity in clinical nursing practice, shorter hospitalizations for more acutely ill patients and pressures from compliance and regulatory agencies. Changes in healthcare economics, advances in technology, and structural operations in delivery systems have caused organizational transformation in healthcare institutions impacting nurse managers (Kleinman, 2003). Nurse managers are instrumental in role-modeling and setting expectations for staff nurses regarding the importance of high quality, transparent and patient-focused care. Additionally, they are the conduit of communication between upper management and the bedside staff, providing key messages and setting the culture for their units and organization. The importance of this role cannot be underestimated in successful healthcare organizations today.

Competencies

The term competency refers to the global ability of an individual to be effective in work activities. A historical definition of competence as noted by Schneider in 1979 includes knowledge and psychomotor abilities, attitudes, and cognitive skills such as problem-solving. Other definitions include fundamental abilities and capabilities to do the job well, and use descriptive language such as traits, capabilities, intelligence, and

human abilities to describe competence. Actual competencies are specific skills and behaviors important to the role (McCarthy, Fitzpatrick, 2009, pg. 346). Some authors believe that competencies can be learned but some are inherited, that some competencies are skills that decrease when not used, and that some occur on a continuum. Leaders of healthcare organizations are encouraged to identify competencies that employees need to operate successfully in the work environment. These competencies then can be used in selection, promotion, appraisal, and career guidance in the organization (Garman, Johnson, 2006; O'Hearne Rebholz, 2006; Verma, et.al 2009).

Eraut (1994) defines competence as a generic term referring to a person's overall capacity, while competency refers to specific capabilities, such as leadership. These competencies are made up of the attributes of knowledge, skills and attitudes. One can refer to how competent an individual is overall or their level of competency in one specific area (Eraut, 1994). One can also assert that overall competence is dependent upon the level of every specific competency. It is important to be able to identify and measure the relevant competencies that contribute to overall competence in the role, and that each specific competency is measured by a set of valid and reliable items representing the appropriate knowledge, skills and abilities (Eraut, 1994). Competency is verification that required skills, processes, or concepts are done or understood correctly as determined by an expert.

Measurements of competence can be understood as referring either to a binary scale, to a number of sequential stages or to a level on a continuum (Clinton, Murrells, & Robinson, 2005). The binary scale refers to where one either is competent (yes) or one is not competent (no). An example of the sequential stages of competence is the work of

Benner (1984), who outlined a five-stage model from novice to expert with competence being stage three. Competence conceptualized as a continuum assigns a level of competence on a continuous scale and can be used for comparisons of clusters such as graduates or other groups (Clinton et al., 2005). A continuous scale is the most efficacious as it provides the sensitivity often required to detect small differences (Clinton et al., 2005).

American Organization of Nurse Executive Competency Framework

The American Organization of Nurse Executive (AONE), a leading professional nursing organization, has provided a competency based conceptual framework of nurse manager leadership. In 1992, AONE conducted a national study to determine the current and predicted roles and responsibilities of nurse managers in healthcare institutions. Data were compiled and analyzed from a random-stratified sample of American Hospital Association (AHA) member hospitals, with questionnaires answered by chief executive officers, nurse executives, and nurse managers from sample institutions. The results of that study, along with contributions from AONE and the AONE Council of Nurse Manager Board of Directors serve as the basis for these guidelines on the evolving role of the nurse manager in healthcare institutions.

Six categories emerged including *management of clinical nursing practice and patient care delivery; management of human, fiscal, and other resources; development of personnel; compliance with regulatory and professional standards; strategic planning;* and *fostering interdisciplinary, collaborative relationships within a unit(s) or area(s) of responsibility and the institution as a whole* (AHA, 1992).

The American Organization of Nurse Executive's (2005) Nurse Manager Leadership Collaborative Framework is continued work by AONE which delineates the roles of the nurse manager as managing the business, leadership, and leader development. This model captures competencies in the areas of communication and relationship management; knowledge of the health care environment; professionalism; and business skills and principles, all intersecting with leadership competencies (AONE, 2005). Communication and relationship building comprises shared decision-making, multi-disciplinary and academic relationships and influence. Knowledge of the health care environment encompasses clinical practice knowledge, an understanding of evidence-based practices and outcome measurements. Active membership in professional organizations and advocacy for ethical practice is part of the professionalism element. Managing the business includes financial management, human resource management, performance improvement, foundational thinking, technology, and strategic planning. The leadership component includes human resource leadership, relationship management, and diversity. Lastly, leader development includes personal accountability and career planning.

Katz Competency Framework

Katz (1955) has provided a legacy conceptual framework. Katz's (1955) three-skill approach stated that the use of each of the skills varies with the level of management responsibility. At lower levels technical skill is indispensable to efficient operation. As the manager moves further from actual operations the need for technical skill decreases. On the other hand at the top level conceptual skill becomes increasingly critical for

successful administration. Human relation skills are the area that is essential at all levels of management according to Katz (1955). (Table 1)

Table 1 Katz Conceptual Framework

Technical Skill	Understanding of a specific kind of activity, involves specialized knowledge.
Human Skill	Primarily concerned with working with people.
Conceptual Skill	Ability to see the enterprise as a whole.

The competency model which has emerged from the business literature chosen for this study is the Katz (1955) model. This legacy model has stood the test of time and has a simple structure which includes three skills ranging in level of complexity and in which circumstances they can be applied. The strength of this leadership framework is that it is a useful way to look at leadership competencies and is applicable to the healthcare setting.

Nurse Manager Role

Nurse managers are accountable to upper-level administration for implementation of the philosophy, goals, and standards of the hospital organization at the unit-level. These pivotal individuals are responsible for overseeing units of people handling the daily operations of a unit or service line. These nurse administrators may be assigned titles such as nurse manager, clinical coordinator, nursing supervisor, or patient care director. They serve as the conduits between nurses and executive management, representing and advocating for their staff. Other responsibilities vary depending on the

size and function of the organization. They may or may not be accountable to a nurse administrator at the organizational level (ANA, 2009).

Nurse managers are responsible to a nurse executive and manage one or more defined areas of nursing services. Nurse managers advocate for and allocate available resources to promote efficient, effective, safe, and compassionate nursing care based on current standards of practice. They promote shared decision-making and professional autonomy by providing input – their own and that of their staff – into executive-level decisions, and by keeping staff informed of executive-level activities and vice versa. Other responsibilities vary depending on the size and function of the organization (ANA, 2009).

Nurse managers also coordinate activities between defined areas of the organization, and provide clinical and administrative leadership and expertise. They facilitate an atmosphere of interactive management and the development of collegial relationships among nursing personnel and others. They serve as a link between nursing personnel and other healthcare disciplines and workers throughout the organization and within the healthcare community. Nurse managers have major responsibility for the implementation of the vision, mission, philosophy, core values, evidence-based practice, standards of the organization, and nursing services within their defined areas of responsibility (ANA, 2009).

Nurse managers are accountable for the environment in which clinical nursing is practiced. The nurse manager must create a learning environment that is open and respectful, and facilitate the sharing of expertise to promote quality care. The ability of nurse managers to enhance the practice environment is critical to the recruitment and

retention of registered nurses with diverse backgrounds and appropriate education and experience (McCarthy and Fitzpatrick, 2009). Nurse managers contribute to the strategic planning process, day-to-day operations, standards of care, and attainment of goals of the organization. Nurse managers collaborate with the nurse executive and others in organizational planning, innovation, and evaluation.

The Scope and Standards from the ANA (2009) for Nurse Administration states that to fulfill the responsibilities, the nurse manager, in collaboration with nursing personnel and members of other disciplines, performs the following:

- Ensure that care is delivered with respect for individuals' rights and preferences.
- Participate in nursing organizational policy formulation and decision-making involving staff.
- Accept organizational accountability for services provided to recipients.
- Evaluate the quality and appropriateness of health care.
- Coordinate nursing care with other healthcare disciplines, and assist in integrating services across the continuum of health care.
- Participate in the recruitment, selection, and retention of personnel, including staff representative of the population diversity.
- Assess the impact of, and plan strategies to address such issues as:
    - Ethnic, cultural and diversity changes in the population.
    - Political and social influences.
    - Financial and economic issues.
    - The aging of society and demographic trends.

- Ethical issues related to health care.
- Assume responsibility for staffing and scheduling personnel. Assignments reflect appropriate utilization of personnel, considering scope of practice, competencies, patient/client/resident needs, and complexity of care.
- Ensure appropriate orientation, education, credentialing, and continuing professional development for personnel.
- Provide guidance for and supervision of personnel accountable to the nurse manager.
- Evaluate performance of personnel.
- Develop, implement, monitor, and be accountable for the budget for the defined area(s) of responsibility.
- Ensure evidence-based practice by participating in and involving the nursing staff in evaluative research activities.
- Provide or facilitate educational experiences for nursing and other students.
- Ensure shared accountability for professional practice.
- Advocate for a work environment that minimizes work-related illness and injury.

For the purpose of this study the nurse manager title is being used and is meant to be identified with the role of unit-level management. Organizations may refer to nurse administrators at the manager-level by other titles, such as District Supervisor, Head Nurse, Department Head, Shift Manager, Clinical Coordinator, Project Manager, or Division Officer.

Statement of the Problem

This research, a descriptive national survey, investigated the important knowledge and behavioral competencies important to the nurse manager role as rated by nurse managers themselves. This 2010 study provides insight to better understand the impact of these competencies on nurse manager development and compares the findings to those identified in 1994. The study further provides a reliable and valid instrument that can be used in practice settings to evaluate competencies and focus on developmental needs of nurse managers.

Purpose of the Study

The purpose of this study is to further develop and validate the psychometric properties of the nurse manager instrument previously developed by the investigator, to repeat the 1994 study of Nurse Manager Competencies, and to compare and contrast contemporary findings with previous findings. The implications of studying nurse manager competencies includes the following: impact on patient care outcomes, impact on nursing leadership curriculum and education, impact on hiring practices, and impact on performance appraisals. This research will refine and advance knowledge about the nurse manager role building on the previous work of the investigator.

Research Questions

The following questions were addressed in this study:

1. What managerial competencies are perceived to be important for effectiveness as a 2010 nurse manger?
2. Upon repeating the original 1994 nurse manager study, what changes in importance ratings of knowledge and ability competencies will be noted?

3. Are importance ratings of nurse manager competencies impacted by the organizational demographics (hospital size, magnet designation, and span of control) or by individual demographics (gender, age, education, years as an RN, tenure in management, and tenure in current position) in the repeat 2010 study?
4. Does the Chase Nurse Manager Competency Instrument have reliable and valid psychometric properties to measure the technical, human, conceptual, leadership and financial management constructs?

Definition of Terms

For the purposes of this study the following conceptual and operational definitions are used:

Nurse Manager

Conceptual: A registered nurse who manages one or more defined areas within nursing services (ANA, 2009). An individual who has a line management position for designated patient care services which includes patient care delivery, fiscal and quality outcomes.

Operational: A nurse leader who is responsible for day-to-day operations of at least one inpatient or outpatient area in the hospital setting. This person has hiring, mentoring and performance responsibility for nursing staff. The nurse manager is the person to whom the staff nurses report. For the purposes of this study the nurse manager is the person evaluating the knowledge and behavioral skill competencies important in the role.

Patient Care Unit

Conceptual: The smallest organizational entity managed as an inpatient or outpatient setting of a healthcare organization.

Operational: The care section (unit) in a hospital setting with a set number of inpatient beds or outpatient treatment spaces. This can be an area providing care and service for any type of subspecialty and tends to be a unique cost center. The leadership structure of a patient care unit is the nurse manger as the leader with staff nurses directly reporting to the manger.

Nurse Manager Competencies

Conceptual: Competency is verification that required skills, processes, or concepts are completed and understood correctly as determined by an expert.

Operational: The inborn or developed performance skills, knowledge, attitudes, or human abilities that enable one to carry out the job of a hospital-based nurse manager effectively.

Technical Skills

Conceptual: Technical skill involves specialized knowledge, analytical ability within that specialty, and facility in the use of the tools and techniques of the specific discipline (Katz, 1955).

Operational: An understanding of, and proficiency in a specific kind of activity, particularly one involving methods, processes, procedures, or techniques.

Human Skills

Conceptual: Human skill is primarily concerned with working with people (Katz, 1955).

Operational: The ability to work effectively as a group member and to build cooperative effort within the team being lead.

Conceptual Skills

Conceptual: Ability to see the enterprise as a whole (Katz, 1955).

Operational: Includes recognizing how the various functions of the organization depend upon one another, and how changes in any one part affect all the others; it extends to visualizing the relationship of the individual business to the industry, the community, and the political, social, and economic forces of the nation as a whole.

Leadership Skills

Conceptual: The ability to engage and motivate others in followership using personal mechanisms of strategic planning, significance, relationships, aspirations and courage. Leadership is ultimately about creating a way for people to contribute to making something extraordinary happen.

Operational: Directing the operations of an entity using skills and behaviors. The process of social influence in which one person can enlist the aid and support of others in the accomplishment of a common task.

Financial Management Skills

Conceptual: This is the management related to the financial structure of the organization this includes the use of financial resources, financial income and expenses.

Operational: A process of implementing and managing financial control systems, collecting financial data, analyzing financial reports, and making sound financial decisions based on the analyses.

Hospital Size

Conceptual: The number of staffed beds in a hospital. The following are the staffed bed size definitions: fewer than 100, 100-199 (small); 200-299, 300-399 (medium); more than 400 beds considered large (AHA, 2009).

Operational: Small = 1- 199 beds, Medium = 200-399 beds, Large = Over 400 beds.

Magnet Hospital

Conceptual: The American Nurses Credentialing Centers' (ANCC) designation awarded to hospitals that have successfully completed and met the Magnet application process.

Operational: The current designation status of the hospital of the nurse manager responding to the survey.

Span of Control

Conceptual: The number of full-time equivalent employees (FTEs) that the nurse manager has directly reporting to them.

Operational: Less than 24 FTEs, 25-49 FTEs, 50-74 FTEs, 75-99 FTEs, 100 or more FTEs.

Gender

Conceptual: The sex of the nurse manager responding to the survey.

Operational: Female or male.

Age

Conceptual: The chronological period of time (in years) that a human being has lived.

Operational: Less than 25 years, 25-34 years, 35-44 years, 45-54 years and 55 years or older.

Highest Level of Educational Preparation

Conceptual: The highest level of formal education that a nurse manger has attained.

Operational: Associate degree, diploma, baccalaureate, master's, and doctorate.

Years Practiced as an RN

Conceptual: The chronological period of time (in years) that a nurse manager has been licensed as a registered nurse (RN).

Operational: Less than one year, 1-2+ years, 3-4+ years, 5-9+ years and 10 or more years.

Years in Management Position

Conceptual: The chronological period of time (in years) that a nurse manager has held any type of management position.

Operational: Less than one year, 1-2+ years, 3-4+ years, 5-9+ years and 10 or more years.

Years in Current Position as First-line Nurse Manager

Conceptual: The chronological period of time (in years) that a nurse manager has held the nurse manager position they are currently in.

Operational: Less than one year, 1-2+ years, 3-4+ years, 5-9+ years and 10 or more years.

Summary

The significance and focus of this study is the nurse manager role with an emphasis on the skills and competencies deemed important by nurse managers themselves to carry out this pivotal role in healthcare organizations. It is essential that leaders in healthcare organizations have an understanding of the knowledge skills and behaviors which can ultimately be role-modeled and have a positive impact on these key role responsibilities. Once understood, these essential competencies can be the building blocks to ongoing development of nurse managers. The aims of this research are to further refine and validate the psychometric properties of the Chase Nurse Manager Competency Instrument previously developed by the investigator, to repeat the 1994 study of Nurse Manager Competencies, and to compare and contrast contemporary findings with previous findings. In Chapter 2 a review of the literature that supports this research is summarized.

CHAPTER II

INTRODUCTION

The nurse manager role and how it is carried out in healthcare organizations has been an important topic over the past two decades. It continues to be an area of interest as it serves as a pivotal influence impacting both patient care and staff outcomes and the success of the organization. *"The responsibility of overseeing hospital patient care units falls directly on the shoulders of first-line managers with an expectation of producing high-quality, low cost care"* (Fox, Fox, & Wells, 1999, p. 12). This complex role encompasses multiple responsibilities, which include the management of clinical practice, human and supply resources, finances, and regulatory compliance standards, along with the development of personnel and strategic planning. To accomplish this, nurse managers continually build personal skills in clinical and leadership competencies (American Organization of Nurse Executives, 1992, 2005).

In this chapter, a literature review forms the basis for exploring and defining nurse manager competencies. First the conceptual framework of the study is established and discussed. Second, the review serves to identify and compare previous research studies that identify competencies at the nurse manager level. Lastly, a discussion and comparison of nurse manager competency instruments is summarized.

Conceptual Framework

In order to begin the discussion of nurse manager competencies it is essential to start with theoretical frameworks and explore constructs and concepts of these frameworks noting any relationships that exist and how they are related to skills and behaviors of the nurse manager role. The theories outlined here – system, leadership,

contemporary and competency-based have evolved over time and have some overlapping concepts. The following discussion will outline the foundational elements of each framework and compare and contrast these theories. (Appendix A)

Systems Theory

Donabedian Theory

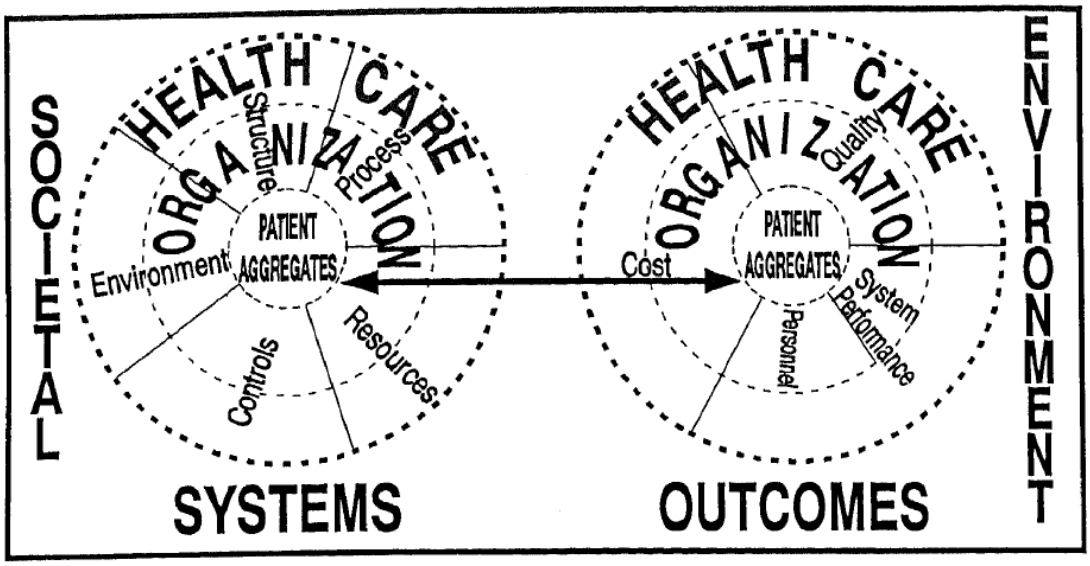
The first construct to recognize related to leadership theories are the system frameworks. Two are selected to describe. They both have outcomes as part of their model. Donabedian (1966) was well noted for the development of structure- process- and outcome- theory. Donabedian believed strongly in the importance of the healthcare structure as a driving force for processes and ultimately outcomes. This theory has been a road map for leadership interpretation of structure to include the perspective of system dynamics in impacting process change.

Iowa Model of Nursing Administration

In 1991, (Gardner, et al.) developed the Iowa Model of Nursing Administration. This model visually indicates interactions between systems and outcomes in nursing administration practice. The two domains of knowledge (systems and outcomes) have embedded within them three levels: the patient, the organization, and the healthcare system. The linkages among the concepts have a practical application for nurse leaders because they integrate the societal and environmental aspects of the system. Environment, control, and resources are illustrated in the societal and systems portion of the model. Personnel, cost, quality and system performance are aspects of the environmental and outcome elements of the model. At the center of both the systems and outcomes is the core of patient aggregates. This model has some characteristics that are

similar to the Donabedian model because it illustrates the importance of systems and processes in order to produce favorable outcomes in a health care organization. The nurse manager role can have a direct impact on the systems and processes impacting outcomes such as cost, quality, personal and performance metrics. (Figure 1) (Gardner, et.al., 1991)

Figure 1 Iowa Model of Nursing Administration



Leadership Theory

Trait Theory

Trait Theory revolves around the notion that leaders are assumed to possess certain personality traits which, if put into practice, result in success. Trait theory focuses on the characteristics or personality of the leader. Stogdill (1974) is credited with identifying the initial set of leadership traits, which include drive, persistence, creative problem-solving, initiative, self-confidence, acceptance of the consequences of one's actions, resilience, tolerance, ability to influence others, and ability to structure social

interactions. The list was further expanded to include such traits as intelligence, integrity, nonconformity, cooperativeness, and tact (American Nurses Credentialing Center [ANCC], 2006, pg. 1).

Behavioral Theory

In contrast to the characteristics that leaders possess (Trait Theory), what leaders do, or how they behave, is the focus of behavioral theorists. The behaviors are noted to categorize leaders by their style of practice. Autocratic leaders propose to change the behavior of subordinates through external control with the use of authority and power. The opposite is true of democratic leaders who appeal to the drive of their subordinates and influence change through participation and collaboration. Bureaucratic leaders rely on organizational policies and rules to influence the behavior of their subordinates. Permissive or laissez-faire leaders use a "hands-off" approach and assume that people are able to make their own decisions and complete their work unaided by direction or facilitation (ANCC, 2006, pg. 1).

Contingency Theory

Contingency Theory has elements that overlap with Behavioral Theory in that it defines several styles of leadership. It differs from Behavioral Theory in that it contends that no one style works effectively in every situation. This ability to adapt one's approach to the situation at hand is labeled contingency theory, or situational leadership (ANCC, 2006, pg. 1).

Hersey, Blanchard, and Johnson (2008) recommended situational leadership as leaders consider the job maturity and psychological maturity of their employees before deciding whether task performance or maintenance (relationship) behaviors on their part

are more important. Job maturity refers to the employee's skill and technical knowledge relative to the job; psychological maturity refers to the employee's self-confidence and self-respect. They suggest that the leader assess the situation and chose the best model to produce the desired effect (Hersey et al., 2008).

Leadership style match permits assessments and suggests the situational style needed; telling – selling – participating – delegating (Hersey et al., 2008, pg. 142). In addition, subordinate readiness occurs along a continuum from low to high relative to ability and willingness. For example, the employee may be categorized as: unable and unwilling; insecure; unable but willing; confident; able but unwilling; insecure; able and willing; confident (Hersey et al., 2008, pg. 142).

The nurse manager role requires different styles of leadership knowledge and behaviors. Traits, behaviors and the ability to assess and use contingency styles to match situations have an impact on competency and performance in the role.

Contemporary Theories

Contemporary theories have emerged in the last decade and include such descriptions as charismatic, transactional, transformational, connective, shared, and servant leadership. Contemporary Theories suggest today's work environment demands flexibility and adaptability on the part of the leader as never before and that one must use several types of leadership to be successful (ANCC, 2006, pg. 1).

Charismatic and Transactional

Charismatic leaders are those who have the ability to engage others because of the power of their personalities. Leaders with charisma tend to lead by building relationships and inspiring followers due to their ability to appeal through the spirit of their personality

to reach shared goals and aspirations. Transactional leadership is derived from the principles of social-exchange theory. Social exchange implies that there are social, political, and psychological benefits to be had in any relationship, including that of leader and follower, and that these benefits are reciprocal (ANCC, 2006, pg. 1).

Transformational

Transformational leadership uses inspiration to gain support for change that is characterized as revolutionary. The transformational leader works to meet the needs of subordinates or potential followers, but raises awareness at a higher level to "arouse and satisfy higher needs, to engage the full person of the follower" (Bass, 1985, pg. 14). More recently, Drenkard (2005) studied transformational leadership and its impact on nurse retention. Drenkard noted a significant inverse relationship with nurse manager transformational leadership and anticipated turnover of RN staff.

Connective

Connective leadership draws on the leader's ability to bring others together as a means of effecting change. Leaders in this category realize that the whole is greater than the sum of its parts and achieve results through collaboration, cooperation, coordination, and collegiality (ANCC, 2006, pg. 1).

Shared

Shared leadership is based on the concept of empowerment. It recognizes the significance of information as well as formal leadership to the success of any enterprise. It acknowledges that no one person can possibly possess all the knowledge or power needed to accomplish intended goals or outcomes within the organization. Self-directed

work-teams and shared governance epitomize the philosophy of shared leadership (ANCC, 2006, pg. 1).

Servant

Servant leadership puts other people and their needs before the leader's self-interest. The person who chooses to serve may be called upon to lead and in so doing may transform the lives of her/his followers (ANCC, 2006, pg. 1).

Effective nurse managers must use contemporary theories in their role in an adaptive and flexible manner. By leading with charisma and transactional styles, nurse managers can influence personnel to meet organizational goals. With the use of transformational, connective, shared or servant leadership styles, a nurse manager can bring staff together and direct work-teams to produce productive outcomes.

Competency Based Theory

Competency-based theory is a relatively new way of thinking about how organizations can gain high performance and sustain it over time. Established as a theory in the early 1990s, competence-based strategic management theory explains how organizations can develop a sustainable competitive advantage in a systematic and structural way. Competence-based theory incorporates economic, organizational and behavioral concerns in a framework that is dynamic, systemic, cognitive and holistic (Sanchez & Heene, 2004). This theory defines competence as: the ability to sustain the coordinated deployment of resources in ways that help an organization achieve goals.

Professional Organization- American Organization of Nurse Executives

A leading professional organization that has provided a conceptual framework of competency-based theory for Nurse Manager Leadership is AONE. This model captures

competencies in the areas of communication, professionalism, knowledge, business skills, all intersecting with leadership competencies (Figure 2; AONE, 2005).

Figure 2 AONE Nurse Manager Leadership Collaborative Framework (AONE, 2005)

Katz Competency Framework

Katz (1955) has provided a legacy conceptual framework. Katz's (1955) three-skill approach stated that the use of each of the skills varies with the level of management responsibility. At lower levels technical skill is indispensable to efficient operation. As the manager moves further from actual operations the need for technical skill decreases. On the other hand, at the top level conceptual skill becomes increasingly critical for successful administration. Human relation skills are the area that is essential at all levels of management according to Katz (1955). (Table 2)

Table 2 Katz Conceptual Framework

Technical Skill	Understanding of a specific kind of activity, involves specialized knowledge.
Human Skill	Primarily concerned with working with people.
Conceptual Skill	Ability to see the enterprise as a whole.

Technical skill implies an understanding of, and proficiency in a specific kind of activity, particularly one involving methods, processes, procedures, or techniques. Technical skill involves specialized knowledge, analytical ability within that specialty, and facility in the use of the tools and techniques of the specific discipline (Katz, 1955).

Human skill implies the ability to work effectively as a group member and to build cooperative effort within the team being lead. Human skill is primarily concerned with working with people (Katz, 1955).

Conceptual skill involves the ability to see the enterprise as a whole; it includes recognizing how the various functions of the organization depend upon one another, and how changes in any one part affect all the others; and it extends to visualizing the relationship of the individual business to the industry, the community, and the political, social, and economic forces of the nation as a whole (Katz, 1955).

In summary a variety of constructs have been compared and contrasted in this section along the continuum from simple trait to more complex behavioral and contingency models which have underpinnings in leadership theories. Additionally, contemporary theories have been compared and contrasted in which behavioral styles have emerged as a theme impacting leadership performance. While all are important the model chosen for this study is the competency based framework because it best identifies

knowledge and behaviors as individual and interconnected parts that collectively are defined as the overarching concept of competence. The Katz Competency Framework was identified as capturing competency clusters pertinent across disciplines and its categories can be applied to nursing leadership competencies. This legacy framework has been previously used by this researcher and others, and continues to encompass and define important categories with its defined structure. This structurally simple, yet eloquent model, also has similar categories as the AONE Leadership Framework therefore is chosen as the model to use in this repeat study. Further discussion of competencies is included in the next section.

Competencies

Competence is a multifaceted and dynamic concept that refers to the understanding of knowledge, clinical skills, interpersonal skills, problem-solving, clinical judgment, and technical skills by the different professions (Verma, Paterson, Medves, 2006, pg. 109). Other definitions include fundamental abilities and capabilities to do the job well, and use descriptive language such as traits, capabilities, intelligence, and human abilities to describe competence (Garman and Johnson, 2006). Actual competencies are specific skills and behaviors. Some authors believe that competencies can be learned but some are inherited, that some competencies are skills that decrease when not used, and that some are on a continuum. Organizations are being encouraged to identify competencies that employees need to operate successfully (O'Hearne Rebholz, 2006). These competencies then can be used in selection, promotion, appraisal, and career guidance (Verma, et.al, 2009).

Noordegraaf (2000) found that, in times of ambiguity and uncertainty, managers need three types of competencies: interpretive competencies, institutional competencies, and textual competencies. Interpretive competencies meant that the manager was able to resolve informational tensions by seeing, selecting, and interpreting cues; knew how to initiate, guide, and guard issues; and could manage issues in times of uncertainty, with an awareness of the "tone" required to reduce tensions. Competent managers were "professional sense-makers" (Noordegraaf). Guo (2003) found similar results and concluded that one cannot perform the role of competent manager without mastering the key human relations skills of communication, listening, and conflict resolution. Some recent studies focused on competencies needed by nurse managers (Connelly, Yoder, & Williams, 2003; Kleinman, 2003; Lin, Wu, Huang, Tseng, & Lawler, 2007; Viitanen, Wili-Peltola, Tampsi-Jarvala, & Lehto, 2007) supported the idea that technical, human, and conceptual skills are the key competency skills needed for effective and successful management.

Management competencies can affect organizational performance. Heffernan and Flood (2000) surveyed 114 human resource managers to determine the usage of competency frameworks in Irish industry. The relationship between the adoption of a competency model and other variables was investigated. The results confirmed that use of a competency framework was linked to improved organizational characteristics and was reflected in better organizational performance, such as reduced turnover and growth of the industry.

Recent literature has focused on the differentiation, or lack thereof, of management and leadership competencies. Sherman, Bishop, Eggenberger, and Karden

(2007) developed a leadership competency model for nurse managers based on six components: personal mastery, financial management, human resource management, systems thinking, caring, and interpersonal effectiveness. In a comprehensive review of the literature, Jennings, Scalzi, Rodgers, and Keane (2007) concluded that ambiguity persists in the identification of management and leadership competencies. They recommended that attention be given to differentiating the concepts to prepare future generations of managers and leaders.

The competency model chosen for this study is the Katz (1955) model. He noted that these skills are related yet have separate characteristics. Katz also noted that the three skills range in level of complexity and in which circumstances they can be applied. The other aspect of the Katz approach is that technical, human and conceptual skills can be learned which is different from Trait Theory and others that contend leadership ability is inherent and leaders are "born" with these personality traits. The strength of this leadership framework is that it is a much more useful way to look at leadership and is applicable to any setting.

Nurse Manager Competencies

The changes in healthcare delivery, the need to ensure cost-effective and quality care in re-engineered hospital environments and the introduction of managed care has led to the recognition that the nurse manager plays a pivotal role in the effectiveness of the health care system (McGinnis & Donner, 1997, pg. 25). Literature trends discussed in the 1990s by McGinnis and Donner (1997, pg.25) on the subject of nurse managers have resulted in four areas of focus: (1) *the increase complexity and multifaceted nature of the nurse manager role* (Baxter, 1993; Duchemin et al., 1994; Duffield, 1994; Mark, 1994;

Mintzberg, 1994; Porter-O'Grady, 1995); (2) *the influence of the nurse manager on the hospital environment* (Evans, 1994; Horvath et al., 1994; Nakata & Saylor, 1994); (3) *specific competencies that comprise the nurse manager role* (Carroll & Adams, 1994; Chase, 1994, Dreisbach, 1994; Duffield, 1992, 1994; Duffield et al., 1994); and , (4) *management education and development* (Evans, 1994; Henninger et al., 1994; Reimer et al., 1994; Spence Laschinger & Shamian, 1994; Sullivan et al., 1994). Similar trends have continued in addition to literature related to nurse manager impact on outcomes in the last decade (Shortell, Zimmerman, Rousseau, Giles, Wagner, Draper, et al., 1994; Ten Haaf, 2007).

Nurse Manager Competency Research

A chronological review of nursing research regarding nurse manager competencies and relevant findings is provided in this section. Early nurse manager studies identified areas of responsibility of head nurses in areas of patient care activities, operational management, and human skills. More recent nurse manager studies have identified current and predicted role functions. There have been several studies outlining specific behavioral competencies of nurse managers in addition to recent studies linking competencies to nurse sensitive outcomes. (Appendix B)

Barker and Ganti (1980) did an in-depth study of the head nurse role. This study was done using a self-logging technique for a two week period. A sample list of activities was provided. It was found that head nurse activities centered in three different areas: hospital-related management functions, the role of the charge nurse performing patient care management functions, and the role of the staff nurse providing direct patient care.

Ferguson and Brunner (1982) developed a model that represents the major elements of the head nurse's managerial role. This model includes management and clinical goals, basic management skills, and key elements within a nursing unit. The skills and behaviors of the head nurse included in this model are the ability to communicate, coordinate, decide, delegate, evaluate, guide, investigate, lead, listen, manage conflict, manage time, organize, plan, solve problems, support, and teach.

Stahl, Querin, Rudy, and Crawford (1983) designed a study to compare the activities identified by head nurses as most typical of their performance and compared these to the activities that supervisors expect of head nurses in their role. Both head nurses and supervisors ranked human resource management, operational management, and patient care management as the three major areas of concern.

In preparation for a leadership training institute for nurse managers, Vance and Wolf (1986) used input from an advisory board of 40 nursing service administrators and educators. The advisory panel rated skill areas they thought were important for their nurse managers to acquire. The construction of their scale was guided by Katz's (1955) classification of skills, a survey of the literature and their own experience. The principles of finance and budgeting were ranked as the most necessary skills. Interestingly, the second, third, fourth, and fifth ranked items: communication skills, diagnosing/solving staff problems, decision-making, conflict management and leadership skills are all classified by Katz (1955) as human skills.

Beaman (1986) suggested selection of individuals for promotion within nursing would be facilitated if a specific list of expected behaviors identified through research for first-line managers was established. Her goal was to identify the specific responsibilities

expected of the first-line manager. This was done by a questionnaire with the results of 31 tasks being selected by over one half of the respondents. These tasks were combined according to similarity of activity, which resulted in 19 common tasks of first-line nurse managers. The common tasks included goal setting, scheduling, quality activities, counseling, budgeting, and education of staff including orientation and in-service schedules.

Necessary competencies and skills of nurse managers also were identified as part of a middle management consolidation effort in Orange, California (Spitzer-Lehmann, 1989). This list was created by other nurse managers and an outside consultant using a nominal group technique and brainstorming. The desired future nurse manager characteristics identified were intellectual functioning, emotional functioning, communication, insight into self and others, and management of self and others.

A study by Weaver, Byrnes, Dibella, and Hughes (1991) asked the research question: *"What kinds of skills do head nurses or patient care coordinators really understand and accept as belonging to the pivotal roles that they play?"* This study compared skills head nurses believe are expected of them with how often they actually employ them. One hundred thirteen first-line managers responded to a skills questionnaire that asked them first to rank 60 described skills according to how often each thought it should be utilized in the nurse manager role and secondly, to rank how often they actually utilized the skill. The study identified areas of both congruity and ambiguity. In the areas of patient care, the nurse managers stated they actively practiced the skills they believe in performing. In the area of managerial skills it was identified that what the nurse manager is actually doing and what they believe they should be doing

differ significantly. Specific skills were not listed by the authors but the need for agreement upon what basic competencies all nurse managers should possess was identified.

Optimism is a human skill which has been identified as essential for the nurse manager. Optimism is identified by Kerfoot (1991) as a learned skill critical for effective leadership. Optimism is defined as learning to reframe difficult situations into positive experiences. Others have made similar conclusions. Porter-O'Grady (1986) concluded that a positive attitude and an ability to see humor in situations is essential to thriving in the nurse manager role and creating a positive work environment that leads to productivity. McCloskey (1990) concluded from a series of turnover studies that a positive environment where there is a perception of autonomy and social integration contributed to nurses' intent to stay on the job.

A 1992 study by Duffield utilized a two round Delphi technique to identify role competencies of first-line managers in New South Wales. She noted that a fit was required between the role, scope of practice, and the individual skills that nurses possess for their jobs (Duffield, 1991). The sample used in this study was a panel of 16 experts that consisted of managers and educators. A list of 168 competencies was categorized from the literature, and the panel was asked to rank those which they expected a competent first-line nursing manager to possess using a five-point Likert-type scale. Consensus criteria consisted of a rating of 3.0 out of 4.0 which eliminated 12 of the 168 competencies. The remaining 116 competencies achieved a mean of 3.5 or more indicating the panel's agreement on the majority of the competencies. One of the most important competencies on which the panel agreed was providing a link between

management and patient care. The panel identified ensuring quality patient care, setting unit goals, maintaining a favorable work environment, maximizing human resources, providing a forum for communication, and controlling a budget as among the top competencies for the nurse manager.

Beuchlin-Telutki, Bilak, Merrick, Reich, and Stein (1993) completed one of the first qualitative studies regarding the nurse manager role and defined six key role elements. This study included planning, staffing and operations, human resource management and development, budget, professional development, and customer service. The outcome of this study was the development of a standard performance appraisal tool utilizing performance criteria related to the role elements.

In the early 1990s, AONE conducted a series of research and collaborative studies which resulted in the publication of the role and functions of the hospital nurse manager (AHA, 1992). Simultaneously, Chase (1994) conducted a descriptive study resulting in instrument development of competency statements. AONE's 1990 study was designed to delineate the current and future roles and responsibilities of the nurse manager and to gather data to identify institutional and educational strategies to support the role (AHA, 1992). This study included surveying 500 nurse managers, 500 nurse executives, and 500 chief executive officers, matched by hospital. Questions to identify current and future components of the nurse manager role were asked of the survey sample utilizing 14 statements. In general, all three categories revealed that they share the same perceptions about what activities currently comprise the nurse manager role, as well as how the position will be characterized in the year 2000. The following functions were reported as being currently performed: facilitating the development of patient care standards,

monitoring patient outcomes using standards, and personnel training. In the year 2000, it was predicted that functions related to patient care standards would commonly be part of the nurse manager's role including: monitoring unit outcomes in relation to criteria provided by national accrediting and approval bodies, monitoring patient outcomes using standards, and identifying areas for patient care standards. Other predicted future roles identified in the survey included having responsibility for more than one nursing unit and having responsibility and authority for ancillary departments that support nursing.

Another aspect of this study focused on nurse manager utilization of time, key contributors to job satisfaction, nurse manager vacancy rates and turnover, and future educational preparation. Nurse managers responding to the survey were asked to estimate the time they spent providing direct patient care versus the time they spent carrying out administrative functions. Nationally, the average nurse manager reported spending approximately 25% of their time in direct patient care activities and 75% engaged in administrative functions. Nurse managers predicted that in the year 2000, 17% of their time would be spent in direct patient care with 83% doing administrative functions.

There was agreement among all three groups surveyed regarding the educational curricular components that will be needed to adequately prepare the nurse manager in the year 2000. These included the subject areas of nursing content, finance and budgeting, computer applications, human resource management, and organizational theory. All respondents indicated that an advanced degree will be the entry-level educational requirement and that an internship or residency component should be included in the nurse manager curriculum.

Six categories emerged including *management of clinical nursing practice and patient care delivery; management of human, fiscal, and other resources; development of personnel; compliance with regulatory and professional standards; strategic planning;* and *fostering interdisciplinary, collaborative relationships within a unit(s) or area(s) of responsibility and the institution as a whole.* Further breakdown of the management of clinical excellence included maintaining a safe, caring environment for patients, developing methods to assess patient's and family's response to nursing care, validating consistent medical regimes, and evaluating the effectiveness of the unit-based clinical programs. Managing resources was further defined as ensuring the effective and appropriate utilization of human and fiscal resources. Human resource development includes participation in the development and support of multi-skilled workers utilized in delivering patient care. Standards compliance includes accountability for local, state, and national professional organizations, regulatory agencies, and government. The nurse manager role and strategic planning includes translating the unit's strategic plan to staff, ensuring support of the plan, and modifying the plan in response to changing internal and external factors. At the unit-level, the nurse manager plays a pivotal role in promoting collegial relationships based on mutual respect and support. These collaborative relationships focus on patient care issues at the unit-level. The findings of this early study stated that these skills need to be continuously focused on by the nurse manager to effectively meet the functions, responsibilities, and accountabilities of the role. (AHA, 1992)

Chase (1994) carried out a descriptive study that described the competencies of the nurse manager. This study was the first to use Katz's (1955) conceptual framework

as the basis for categorizing nurse manager competencies into five main categories: technical skills, human resource skills, conceptual skills, leadership skills, and financial management. Two hundred eleven nurse managers from across the country ranked 53 competencies from their perceptions of importance in the area of knowledge and ability to use the skills. The managers ranked effective communication, a component of human resource skills, and decision-making, a component of leadership, as the highest in perceived importance. These managers ranked the technical skill of the use of research and the conceptual skill of the use of theory as the lowest in perceived importance.

Research accelerated in the mid-90s with more focus on role delineation, nurse manager impact on retention, and patient outcomes. Shortell and colleagues (1994) noted in their study that managerial practices influence patient outcomes. This study gathered adjusted mortality, length of stay, and nurse turnover data from 42 intensive care units. They demonstrated manager leadership affected nursing retention and had better overall mortality data on their units. In addition, they suggested that quality improvements related to the core variables of culture, leadership, communication, and conflict management needed to be implemented by the nurse manager as a key part of the nurse manager role in order to influence both patient outcomes and staff satisfaction.

Sanders, Davidson, and Price (1996) identified important elements of the unit nurse manager's role. The findings included administration, clinical skill, education, and research. The researchers proposed using these elements for nurse manager development and mentorship.

Oroviogoicoechea (1996) published a comprehensive literature review of the clinical nurse manager role. A summary of the literature revealed a consensus that

human and leadership skills are taking the place of clinical competencies. The researchers noted that decision-making is the key factor in responding to the changing and competitive healthcare environment.

Cook (1999) conducted research to determine the difference between the importance and degree of satisfaction of nurse managers assigned to their performance in achieving leadership competencies. Of the highest competency score ratings of importance and satisfaction, four competencies were significant; the nurse manager treating others with respect, nurse manager accountability, nurse manager self-trust, and nurse manager having a vision for the unit.

In 2002, Drach-Zahavy and Dagan did a qualitative study with the aim to document the observed work and frequency of nurse managers' activities in order to identify the key competencies necessary for their role. Clinical care, care coordination, operational unit functions, leading staff and personnel management, and quality improvement as the main competencies that these nurse managers most frequently performed.

Between the years of 1997 and 2003, four quantitative studies were completed in different settings regarding Nurse Manager Competencies which repeated the Chase (1994) study. Georgette (1997), Kondrat (2000) and Care and Udod (2003) used different samples but had similar findings. In 2007, Ten Haaf also used the Chase Instrument and examined competencies and outcomes.

Ziegfeld (1997) also cited the Chase study and used the Katz framework with a study cohort with a convenience sample of ten nurse managers, assistant directors, and directors of nursing to review a program of nurse manager orientation. This study

identified competencies to contribute to leadership curriculum in an academic setting. The focus areas of fiscal, human resources and mentoring were noted to emerge as key components of a development program based on the survey results.

"Vision 2020: Future Nurse Managers Project" explored the education, skills, and knowledge considered to be important for the nurse manager (Scoble & Russell, 2003). Phase 1 involved an integrated literature review and a critique of two surveys to assist in identifying the educational preparation, skills, and knowledge that are considered important for nurse leaders in managerial and administrative positions in the future. Phase 2 elicited input from nurse managers and executives on what education future nurse managers and executives need to be effective leaders in the dynamic healthcare delivery system. This study identified eight skills needed including communication, human resources, collaboration, clinical skills, change management, thinking skills, financial management and integrity. Phase 3 includes the design of educational offerings for a Master's of Science in Nursing, a certificate program, and continuing education for future nurse managers.

Kleinman (2003) presented a descriptive study that explored nurse management roles. The top competencies identified included scheduling, financial, and human resource management. The analysis concluded the need for preparation in both the management and clinical practice aspects of their role.

Contino (2004) presented four categories of roles for the nurse manager and suggested they were necessary for nurse manager education and development. Competencies included organizational management skills, communication skills, data operations analysis, strategic planning, and creative visionary skills.

Donaher (2004) developed and tested the psychometric properties of the Human Capital Competencies Inventory (HCCI). Essential competencies in a 61-item inventory of skills-based activities were identified in an analysis of the literature describing the essential competencies of nurse managers yielding five subscales; developing self, recruiting, developing others, utilizing and retaining.

In 2005, Harrison used a modified Delphi technique that was designed to identify future personal attributes and job competencies needed to help update requirements for middle managers. These preselected personal attributes and job competency clusters were drawn from various sources including related competency profiles, job descriptions, and synthesized reviews of the literature. Three rounds of consensus narrowed 28 to 15 personal attributes and competency clusters regarding nurse manager competencies.

Lin, Wu, and White (2005) presented an exploratory study that used the Activity Competency Model to investigate the perceived importance of the managerial activities for the nurse manager. They found five competencies that were perceived as most important were nursing quality management, job planning and assignments, goal setting, job monitoring, and nurse training regardless of hospital size.

The American Organization of Nurse Executive (2005) Nurse Manager Leadership Collaborative Framework is continued work by AONE which delineated the roles of the nurse manager as managing the business, leadership, and leader development. Managing the business included financial management, human resource management, performance improvement, foundational thinking, technology, and strategic planning. Leadership included human resource leadership, relationship management, and diversity. Lastly, leader development included personal accountability and career planning.

A comparison of the AONE Leadership Framework and the Chase Nurse Manager Competency Instrument note that the skills and competencies have similar categories as follows; the AONE category **Knowledge of the Healthcare Environment** parallels the **Technical** category, the AONE **Communication and Relationship** category parallels the **Human** category, the **Professionalism** category parallels the **Conceptual** category, the **Leadership** categories exist in both frameworks as does the AONE **Business Skills** which is similar to the **Financial Management** category in the nurse manger instrument. (Table 3)

Table 3 AONE Competencies - Chase Instrument Crosswalk

AONE	CHASE
Knowledge of the health care environment	**Technical**
Clinical practice knowledge	Nursing Practice Standards
Patient care delivery models and work design knowledge	Nursing Care Delivery Systems
Health care economics knowledge	Nursing Care Planning
Health care policy knowledge	Clinical Skills
Understanding of governance	Patient Acuity Systems
Understanding of evidence-based practice	Infection Control Practices
Outcome measurement	Research and Evidence-based Practice
Knowledge of and dedication to patient safety	New Technology
Understanding of utilization / case management	Case Management
Knowledge of quality improvement and metrics	Information Systems and Computers
Knowledge of risk management	Regulatory Agency Standards
Communication and relationship-building	**Human**
Effective communication	Effective Communication
Relationship management	Effective Staffing Strategies
Influence of behaviors	Recruitment Strategies
Ability to work with diversity	Retention Strategies
Shared decision-making	Effective Discipline
Community involvement	Effective Counseling Strategies
Medical staff relationships	Constructive Performance Evaluation
Academic relationships	Staff Development Strategies
	Group Process
	Interviewing Techniques
	Team-building Strategies
	Humor
	Optimism
Professionalism	**Conceptual**
Personal and professional accountability	Nursing Theories
Career planning	Administrative / Organizational Theories
Ethics	Strategic Planning / Goal Development
Evidence-based clinical and management practice	Ethical Principles
Advocacy for the clinical enterprise and for nursing practice	Teaching / Learning Theories
Active membership in professional organizations	Political Process & Advocacy
	Quality/Process Improvement
	Legal Issues

Table 3 – continued

Leadership Skills	**Leadership**
Foundational thinking skills	Decision-making
Personal journey disciplines	Power and Empowerment
The ability to use systems thinking	Delegation
Succession planning	Change Process
Change management	Conflict Resolution
	Problem-solving
	Stress Management
	Research Process
	Motivational Strategies
	Organization of Unit of Work and Workflow Process
	Policies and Procedures
	Staff Education
	Time Management
	Interdisciplinary Care Coordination
Business Skills	**Financial Management**
Understanding of health care financing	Cost Containment and Cost Avoidance Practices
Human resource management and development	Productivity Measurements
Strategic management	Operational & Capital Budget Forecasting and Generation
Marketing	Cost Benefit Analysis
Information management and technology	Unit Budget Control Measures
	Financial Resource Procurement
	Financial Resource Monitoring

In 2006, DeOnna completed a study to test the psychometric properties of the Nurse Manager Competency Inventory (NMCI) tool for measuring the job competencies linked to performance in the hospital setting. The highest reported competencies were performing supervising response, promote staff retention and conduct unit operations. Recommendations from this study proposed the use of the NMCI as a tool for healthcare personnel in human resources, leadership, and education in areas related to: staff training and development, recruitment and selection, performance management, succession planning, and retention.

Hosseni's (2007) study purpose was to identify important leadership characteristics of nurse leaders in 2010. Using a Delphi technique, 11 nurse executives comprised a panel of experts and ranked 40 items as most important relative to nurse leader competencies. Consensus was reached on 20 items and these were grouped into 14 personal and six organizational leadership skills. The findings of this Delphi study provide a research basis for hospital administrators, training organizations and nursing programs to use in designing leadership training courses.

In 2007, Ten Haaf completed a quantitative study that explored the correlation of the five domains of Katz's conceptual framework (technical, human, conceptual, financial and leadership) of nurse manager competencies and staff and patient outcomes. This study used the Chase Instrument and examined the relationships with staff satisfaction, patient satisfaction with pain control and patient care outcomes including patient falls and medication errors. The only significant correlation was patient satisfaction with pain control.

In 2009 an exploratory study by Lewis et al. examined specific management behaviors associated with stress in nursing. Convenience samples of 41 staff from five different organizations were interviewed. The content analysis elicited 19 competencies, of which 14 are presented in Table 4 with positive and negative indicators. The remaining 5 competencies, 'Seeking Advice', 'Health and Safety', 'Feedback', 'Managing Conflict', 'Knowledge of Job', were mentioned less than 1% of the time by interviewees and subsequently eliminated.

Table 4 Stress Management Competency Framework with Positive and Negative Behavioral Indicator Ranks in Order of Dominance of Theme (Lewis, 2009)

Competency	Positive examples of manager behavior	Negative examples of manager behavior
Managing workload and resources	• Bringing in additional resource to handle workload • Aware of team members ability when allocating tasks • Monitoring team workload • Refusing to take on additional work when team is under pressure	• Delegating work unequally across the team • Creating unrealistic deadlines • Showing lack of awareness of how much pressure team are under • Asking for tasks without checking workload first
Individual consideration	• Provides regular one-to-ones • Flexible when employees need time off • Provides information on additional sources of support • Regularly asks "how are you?"	• Assuming everyone is okay • Badgering employees to tell them what is wrong • Not giving enough notice of shift changes • No consideration of work life balance
Participative approach	• Provides opportunity to air views • Provides regular team meetings • Prepared to listen to what employees have to say • Knows when to consult employees and when to make a decision	• Not listening when employee asks for help • Presenting a final solution rather than options • Making decisions without consultation
Accessible/visible	• Communicating that employees can talk to them at any time • Having an open door policy • Making time to talk to employees at their desks	• Being constantly at meetings/away from desk • Saying "don't bother me now" • Not attending lunches or social events with employees
Empowerment	• Trusting employees to do their work • Giving employees responsibility • Steering employees in a direction rather than imposing direction	• Managing "under a microscope" • Extending so much authority employees feel a lack of direction • Imposing a culture of "may way in the only way"
Communication	• Keeps team informed what is happening in the organization • Communicates clear goals and objectives • Explains exactly what is required	• Keeps people in the dark • Holds meetings "behind closed doors" • Doesn't provide timely communication on organizational change
Dealing with work problems	• Following through problems on behalf of employees • Developing action plans • Breaking problems down into manageable parts • Dealing rationally with problems	• Listening but not resolving problems • Being indecisive about a decision • Not taking issues and problems seriously • Assuming problems will sort themselves out
Acting with integrity	• Keeps employee issues private and confidential • Admits mistakes • Treats all employees with same importance	• Speaks about employees behind their backs • Makes promises, then doesn't deliver • Makes personal issues public

Table 4 (continued)

Competency	Positive examples of manager behavior	Negative examples of manager behavior
Process planning and organization	• Reviewing processes to see if work can be improved • Asking themselves "could this be done better?" • Prioritizing future workloads • Working proactively rather than reactively	• Not using consistent processes • Sticking too rigidly to rules and procedures • Panicking about deadlines rather than planning
Development	• Encourages staff to go on training courses • Provides mentoring and coaching • Regularly reviews development • Helps employees to develop within the role	• Refuses requests for training • Not providing upward mobility in the job • Not allowing employees to use their new training
Empathy	• Takes an interest in employee's personal lives • Aware of different personalities and styles of working within the team • Notices when a team member is behaving out of character	• Insensitive to people's personal issues • Refuses to believe someone is becoming stressed • Maintains a distance from employees "us and them"
Taking responsibility	• Steps in to help out when needed • Communicating "the buck stops with me" • Deals with difficult customers on behalf of employees	• Saying "it's not my problem" • Blaming the team if things go wrong • Walking away from problems
Expressing and managing own emotions	• Having a positive approach • Acting calmly when under pressure • Walking away when feeling unable to control emotion • Apologizing for poor behavior	• Passing on stress to employees • Acting aggressively • Loosing temper with employees • Being unpredictable in mood
Friendly style	• Willing to have a laugh and a joke • Socializes with team • Brings in food and drinks for team • Regularly has informal chats with employees	• Criticizes people in front of colleagues • Pulls team up with talking/laughing during working hours • Uses harsh tone of voice when asking for things

Instrumentation

Nurse Manager Competency Instrument- Psychometric Properties

The literature review included a search for instruments related to measurement of Nurse Manager Competencies. This revealed eight Nurse Manager Competency instruments that have been found in the literature to date. (Appendix C) Each of the instruments is reviewed in this section.

In 1982 Goodrich provided the first study using an instrument she developed to identify nurse executive competencies. This same instrument was later used in 1996 by Lewis with a study sample of Chief Nurse Executives. While these studies did not focus on nurse managers they did examine and describe nurse leadership competencies.

In 1994 the Chase Nurse Manager Competency Instrument was used with a national sample of nurse managers and described these competencies as rated by nurse managers themselves. Limited psychometric testing was done at the time of this original study. This instrument has been used since 1994 by a number of researchers and no major revisions or additional psychometric testing has been done on the original instrument.

Cook (1999) used a sample of graduate students in Canada to determine nurse manager impact on satisfaction in several categories. No further instrument development has been done by this researcher.

In the last decade more work has been done by several researchers including the use of instruments. In 2004, Donaher used the Human Capital Competencies Inventory (HCCI) which is a 58 item instrument listing competencies consistent with the American Nurses Association (ANA) scope of administrative standards. This was a dissertation

and the focus and findings of this research indicate the reliability and validity of the instrument.

Two studies using a Delphi technique are noted by researchers Harrison (2005) and Hossini (2007). Both used expert panels to identify leadership clusters and build consensus regarding leadership and organizational skills of nurse managers.

Lastly, DeOnna (2006) conducted a dissertation study which tested psychometric properties of the Nurse Manager Competency Inventory (NMCI). This instrument was noted to be weighted and thus more defined than previous instruments. The findings noted that this instrument by virtue of the competency weightings would better serve to develop nurse managers and be valuable for hiring and performance evaluations. DeOnna also noted that focused role modeling could occur based on competency measurements using this instrument.

Summary

First-line nurse managers play a critical management role because they can influence the success of the healthcare organization (Chase, 1994, pg. 56). This chapter has outlined four conceptual frameworks; systems, leadership, contingency and competency based. These conceptual frameworks are important in this review because they establish models and emerging relationships regarding competencies. From these conceptual models the competency based frameworks provide the foundation for which competencies prove effective in nurse manager roles. Katz's (1955) legacy framework continues to emerge when reviewing competency literature. The three skill levels (technical, human, and conceptual), which have been identified in the Katz (1955) model

as necessary for effective administration, have been previously identified in nurse executive and nurse manager research studies.

The nurse manager literature was searched specifically for nurse manager research using CINAHL, PUBMED, and dissertation databases resulting in 24 qualitative and quantitative studies that specifically explored and reviewed roles of the nurse manager since 1980. The literature reveals competencies identified for effectiveness in healthcare settings are general management/health/nursing knowledge, human management skills, and total organizational view. Other research related to nurse manager competencies have established that leadership competencies including decision-making, communication, problem-solving, delegation, motivation, conflict management, and group process are essential. The nurse manager research consistently identifies domains of communication, interpersonal relationships, development, unit operations, and leadership as important nurse manager competencies.

The research review in this area reveals eight tools/instruments (including Chase, 1994) that have been used in nurse manager research specifically related to competencies and roles although two of the eight instruments were designed to measure nurse executive competencies. It appears that the Chase Nurse Manager Competency Instrument has been utilized with the most frequency (four times) and all in theses and dissertations. No further psychometric testing on the instrument beyond the original study. (Appendix D)

The purpose of this study is to validate the psychometric properties of the Chase Instrument and to repeat the 1994 nurse manager study in order to identify important nurse manager competency ratings and compare to and describe 2010 study results contributing to a body of knowledge which can be used for role development.

CHAPTER III

RESEARCH METHODS

This 2010 study examined the knowledge and ability competencies of nurse managers as rated by nurse managers themselves, repeating the initial research by the investigator in 1994. This study uses an instrument developed by the investigator (Chase Nurse Manager Competency Instrument) as a means to elicit quantitative ratings of nurse managers themselves via a web-based survey. Additionally an important aspect of the study is aimed at establishing the validity and reliability of the instrument for use in further research. This chapter describes the research questions, definitions, instrument, population and sample, review of the instrument by an expert focus group process, limitations of the research and ethical considerations.

Research Questions

Many characteristics and organizational variables can impact the knowledge and behavioral abilities of the nurse manager influencing the competencies of managers and how they carry out the role. The purpose of this study is to compare survey findings from the original 1994 nurse manager study and the findings from the 2010 study. Nurse manager competency ratings are analyzed to determine if any associations exist with the organizational variables of hospital size, magnet, and span of control; or the individual variables of gender, age, education, years of RN practice, tenure in management, and tenure in current nurse manager position. The original study included analysis of each of these variables with the exception of Magnet status, span of control and gender.

The following questions were addressed in this study:

1. What managerial competencies are perceived to be important for effectiveness as a 2010 nurse manger?
2. Upon repeating the original 1994 nurse manager study, what changes in importance ratings of knowledge and ability will be noted?
3. Are importance ratings of nurse manager competencies impacted by the organizational demographics (hospital size, magnet designation, and span of control) or by individual demographics (gender, age, education, years as an RN, tenure in management, and tenure in current position) in the repeat 2010 study?
4. Does the Chase Nurse Manager Competency Instrument have reliable and valid psychometric properties to measure the technical, human, conceptual, leadership and financial management constructs?

The following grid provides conceptual and operation definitions for the five key constructs in the study in addition to the demographic characteristics that may impact these key competencies.

Table 5 Conceptual and Operational Definitions

Category	Conceptual Definition Instrument Constructs	Operational Definition	Measure
Technical	Technical skill involves specialized knowledge, analytical ability within that specialty, and facility in the use of the tools and techniques of the specific discipline (Katz, 1955).	An understanding of, and proficiency in a specific kind of activity, particularly one involving methods, processes, procedures, or techniques.	Chase (1994) instrument. Importance rating of categorical items.
Human	Human skill is primarily concerned with working with people (Katz, 1955).	The ability to work effectively as a group member and to build cooperative effort within the team being lead.	Chase (1994) instrument. Importance rating of categorical items.
Conceptual	Ability to see the enterprise as a whole (Katz, 1955).	Includes recognizing how the various functions of the organization depend upon on another, and how changes in any one part affect all the others; and it extends to visualizing the relationship of the individual business to the industry, the community, and the political, social, and economic forces of the nation as a whole.	Chase (1994) instrument. Importance rating of categorical items.
Leadership	The ability to engage and motivate others in followership using personal mechanisms of strategic planning, significance, relationships, aspirations, and courage. Leadership is ultimately about creating a way for people to contribute to making something extraordinary happen.	Directing the operations of an entity using skills and behaviors. The process of social influence in which one person can enlist the aid and support of others in the accomplishment of a common task.	Chase (1994) Instrument. Importance rating of categorical items.
Financial Management	This is the management related to the financial structure of the company and therefore to the decisions of source and use of financial resources, that is reflected in the size of the financial income and/or charges.	A process of implementing and managing financial controls systems, collecting financial data, analyzing financial reports, and making sound financial decisions based on the analyses.	Chase (1994) instrument. Importance rating of categorical items.

Table 5 - continued

Category	Conceptual Definition	Operational Definition	Measure
Demographic Variables – Organizational			
Hospital Size	The number of staffed beds in a hospital. The following are the staffed bed size definitions: fewer than 100, 100-199 (small), 200-299, 300-399 (medium), more than 400 beds considered large (AHA, 2009).	Small = 1-199 beds, Medium = 200-399 beds, Large = Over 400 beds.	Demographic information
Magnet Hospital	The American Nurses Credentialing Centers' (ANCC) designation awarded to hospitals that have successfully completed and met the Magnet application process.	The current designation status of the hospital of the Nurse Manager responding to the survey.	Demographic information
Span of Control	The number of full time equivalent employees (FTEs) that the Nurse Manager has directly reporting to them.	Less than 24 FTEs, 25-49 FTEs, 50-74 FTEs, 75-99 FTEs, 100 or more FTEs.	Demographic information
Demographic Variables – Individual			
Gender	The sex of the Nurse Manager responding to the survey.	Female or male.	Demographic information
Age	The chronological period of time (in years) that a human being has lived.	Less than 25 years, 25-34 years, 35-44 years, 45-54 years and 55 years or older.	Demographic information
Highest level of educational preparation	The highest level of formal education that a Nurse Manager has attained.	Associate degree, diploma, baccalaureate, masters, and doctorate.	Demographic information
Years of RN practice	The chronological period of time (in years) that a Nurse Manager has been licensed as a registered nurse (RN).	Less than one year, 1-2+ years, 3-4+ years, 5-9+ years, and 10 or more years.	Demographic information
Years in management position	The chronological period of time (in years) that a Nurse Manager has held any type of management position.	Less than one year, 1-2+ years, 3-4+ years, 5-9+ years, and 10 or more years.	Demographic information
Years in current position as first-line nurse manager	The chronological period of time (in years) that a Nurse Manager has held the Nurse Manager position they are currently in.	Less than one year, 1-2+ years, 3-4+ years, 5-9+ years, and 10 or more years.	Demographic information

Research Design

This is a descriptive study focused on measuring nurse manager competency ratings. A descriptive study collects detailed descriptions of existing variables to assess and justify current conditions and practices (LoBiondo-Wood and Haber, 2002). Investigators may use a descriptive survey design to search for accurate information about the characteristics of particular subjects, groups, institutions or situations or about the frequency of a phenomenon's occurrence, particularly when little is known about the phenomenon (LoBiondo-Wood and Haber, 2002, pg. 240).

The research used a national web-based survey to collect information from hospital nurse managers via a self-administered competency instrument. Nurse managers were asked to rate competencies as they perceive them as necessary to carry out their jobs effectively. A demographic section of the instrument collected information regarding two levels of variables; organizational and individual. Organizational variables included hospital size, Magnet status and span of control. Individual variables consist of gender, age, education, years of RN practice, tenure in management and tenure in current position. A description of these variables will be described in this study. This study will not manipulate variables but will assess data in order to provide data for future nursing studies.

Study Sample

The purposive sample chosen for the study was nurse managers in hospital settings in the United States who are members of the American Organization of Nurse Executives (AONE). This investigator is a member of AONE and was aware of an accessible segment of membership in nurse manager positions which is considered

heterogeneous of the nurse manager population. Purposeful sampling is an increasingly common strategy in which the researcher's knowledge of the population and its elements is used to select the sample population who are considered to be typical of the general nurse manager population, (LoBiondo-Wood and Haber, 2002, pg. 268). This subset of AONE members is considered to be credible due to their current standing and experience as contemporary nurse managers. They are also viewed as reliable and engaged in their roles as demonstrated by their membership in a professional nationally recognized nursing leadership organization. The AONE has an active membership listing of nurse managers from across the United States which was considered an excellent group to survey since they have experience and professional engagement in the role. Additionally AONE has a subset of nurse managers participating in a one year fellowship to further develop their skills in the nurse manager role. This subset is known as the cadre of Nurse Manager Fellows. The AONE Nurse Mangers were also used in the 1994 study.

For the purpose of this study, the nurse manager is defined as a unit-based nursing leader who is responsible for day-to-day operations of at least one inpatient area. This population is chosen because of the importance of eliciting information and perceptions from individuals who are actually in the role. Consideration was given to the possibility of including physicians, staff nurses, nursing supervisors or patients as additional respondents in the study. It is recognized that these individuals would potentially be a possible source of information, but nurse managers are considered to be a more reliable source regarding the competencies necessary to be effective in their role.

Instrumentation

The Chase (1994) Nurse Manager Competency Instrument includes two parts. The first part consists of a competency rating scale developed by the investigator. (Appendix E) The methodology of the questionnaire development included an extensive literature review to identify and create competency statements. Instructions for the instrument direct respondents to select the corresponding rating based on their opinion to the importance rating of each competency statement. A Likert scale indicates the level of competency rating on a 1-4 scale for both knowledge and ability importance levels, 4=essential for first-line nurse manager, 3=contributes significantly, 2=contributes moderately, 1=contributes minimally.

The second part of the instrument is composed of demographic questions. These questions are an important part of the questionnaire because they are the method of collecting data regarding the extraneous variables (covariates) that may impact the ratings. Organizational variables included hospital size, Magnet status and span of control. Individual variables consist of gender, age, education, years of RN practice, tenure in management and tenure in current position. (Appendix E)

Expert Panel Review of Instrument

Because it had been over 16 years since the instrument was developed, a 2010 review of the instrument was done by a panel of experts. The AONE Fellows were chosen to serve in this capacity. The AONE Fellows are a subset of the AONE nurse manger membership and provided expertise to review the instrument for the 2010 study. AONE Fellows are nurse managers who have participated in a one year program geared for role development and networking. They are required to produce a capstone project

using the skills they gain from the program. There were 75 active AONE Fellows and they were asked to review the competency statements as experts in the field. AONE gave permission and supplied email addresses to the investigator for this purpose. A cover letter (Appendix F) was developed to ask the fellows for their help and expertise in reviewing the competency statements. Fifty-three AONE Fellows provided feedback for a response rate of 71%. (Appendix G)

The competency statements were believed to be stable and previous studies using the instrument have not identified lacking competencies or gaps by other researchers (Georgette, 1997, Kondrat, 2000, Care & Udod, 2003; Ten Haaf, 2007). Based on AONE Fellow feedback six competency statements were revised due to changes since 1994 in the language used and the desire to add clarity to the meaning of the competency statements. In the technical section, #5 "Patient Classification Systems" was considered outdated. The contemporary language more familiar to nurse managers today is "Patient Acuity Systems". The suggestion also was received to include the terminology of "Evidence-Based Practice" to the "Research Based Practice" nomenclature. In the conceptual section, #30 "Political Processes" was changed to "Political Process and Advocacy" to enhance the meaning of this competency. Additionally, #31 "Total Quality Management Processes" was considered to be outdated language and relabeled "Quality Improvement Processes". In the Leadership category #42 "Organization of Unit Work" was enhanced by revising it to state "Organization of Unit Work and Workflow Processes" to reflect the description of the competency of workflow design in the current environments. Lastly in the Financial Management section #49 "Unit Budgeting and Forecasting" was enhanced to "Operational & Capital Budget Forecasting and

Generation" to be a better description of the skill set necessary in both areas of operational and capital budgets in today's data driven organizations. No changes were made to statements in the Human section. Changing the terminology did not change the content or meaning, nor did it necessitate having to put any of these statements into new sections in the instrument. This resulted in six minor changes in the instrument.

Consultation from the Nurse Manger Fellows resulted in nomenclature changes adding clarity to the competency statements based on their expertise and suggestions for contemporary terminology. Table 6 illustrates the changes to the competency statements for the 2010 survey.

Table 6 Instrument Revisions 1994 - 2010

1994	2010
Technical 5. Patient Classification Systems 7. Research based care practice	**Technical** 5. Patient Acuity Systems 7. Research and Evidence-based Practice
Conceptual 30. Political Process 31. Total Quality Management Processes	**Conceptual** 30. Political Process and Advocacy 31. Quality/Process Improvement
Leadership 42. Organization of Unit of Work	**Leadership** 42. Organization of Unit of Work and Workflow Process
Financial Management 49. Unit Budget Forecasting / Generation	**Financial Management** 49. Operational & Capital Budget Forecasting and Generation

In the demographic section three additional questions were added in order to capture new issues in today's healthcare environment. The Magnet variable was added by the investigator to the current study due to the growing number of Magnet accredited organizations and the component of transformational leadership skills and behaviors which are part of the Magnet philosophy and culture (ANCC, 2008). The nurse manager

span of control variable was added due to current nurse managers having increasing scope as some may have more than one unit they are responsible for, potentially impacting knowledge and ability competencies necessary for the role.

It is important to identify any differences between key competencies identified by nurse mangers in Magnet vs. non-Magnet organizations. It is also noted that manger scope has changed since 1994 and may contribute to importance ratings. Since the original 1994 study nurse managers have increased their span of control and it is important to see if there is an impact on this phenomenon. Gender was added as an area of interest to identify any potential differences.

Nurse Manager Competency Tool-Psychometric Properties – Reliability and Validity

The Chase Nurse Manager Competency Instrument is noted to have a strong conceptual framework (Katz, 1955) and a broad base of 53 competency statements. In addition to the original study this instrument has been used in thesis and dissertations by four other researchers and to date no additional competency statements and minimal psychometric testing has been done by these researchers (Georgette, 1997; Kondrat, 2000; Care & Udod, 2003: Ten Haaf, 2007). This instrument elicits responses from nurse managers themselves to evaluate the important five domains of the nurse manager competencies utilizing a Likert scale. The aspects of competency include technical skills, human relation skills, conceptual skills, leadership skills and financial management.

Validity of the Chase Nurse Manager Competency Instrument was established initially through face validity and content validity (Chase, 1994). Face validity is the opinion of outside experts indicating the tool is a true measure for which it is intended (Neuman, 2003). Face validity is supported by the original expert review during the

thesis development. This instrument also focuses on nurse manager competency which is a specific area of knowledge contributing to content validity (Mertens, 2005). Using the AONE Fellows as a panel of experts supports content validity of the instrument.

Test Retest Reliability

Reliability of the Chase Nurse Manager Competency Instrument was established initially in 1994 through a test-retest process. A pilot study provided two separate studies that were administered two-weeks apart. A Pearson's product moment correlation analysis was performed on the overall scale ($r = 0.93$) and on each categorical section of the survey from the two measures (Chase, 1994, pg. 28). This demonstrates stability over time. The results of the technical, human, conceptual, leadership, and financial management categorical correlations were 0.80, 0.85, 0.84, 0.91, 0.92, respectively (Chase, 1994, pg. 28). The multiple components of each construct also add to the reliability of the tool. Neuman (2003) points out that the use of multiple indicators is less likely to produce a systematic error and can provide more stable results.

A second test- retest process was done in 2010. Test-retest reliability was conducted two weeks apart with 23 nurse managers at a large academic medical center with the following results. The 2010 Pearson's product moment correlation analysis was $r = 0.88$ and the 2010 results of the technical, human, conceptual, leadership and financial management categorical correlations were 0.73, 0.76, 0.90, 0.86, 0.70, respectively.

The instrument lacks two psychometric tests to solidify its reliability and validity properties. A Cronbach's alpha is necessary to test internal consistency on scale subgroups. Exploratory factor analysis is necessary to analyze interrelationships among a large number of variables (Hair, Black, Babin, Anderson, & Tatham, 2006, pg. 17). This

will serve to reduce the observed variables to a smaller number of common factors, ascertain the minimum number of unobserved common factors that can account for the observed correlations among variables, and to explore the underlying dimensions of the observed data set (Gliem, 2009, pg. 39). Once further tested and analyzed, the instrument can be determined as a reliable and valid measure of important nurse manager competencies.

IRB Approval and Informed Consent

IRB approval for this study was obtained from the University of Iowa Human Subjects Institutional Review Board prior to the study (Appendix H). The potential risks were minimal and that the participants may have felt uncomfortable with the questions. Participants were free to skip questions. There was no direct benefit to the participants except for the knowledge that they were contributing their expert views on the subject of nurse manager competencies

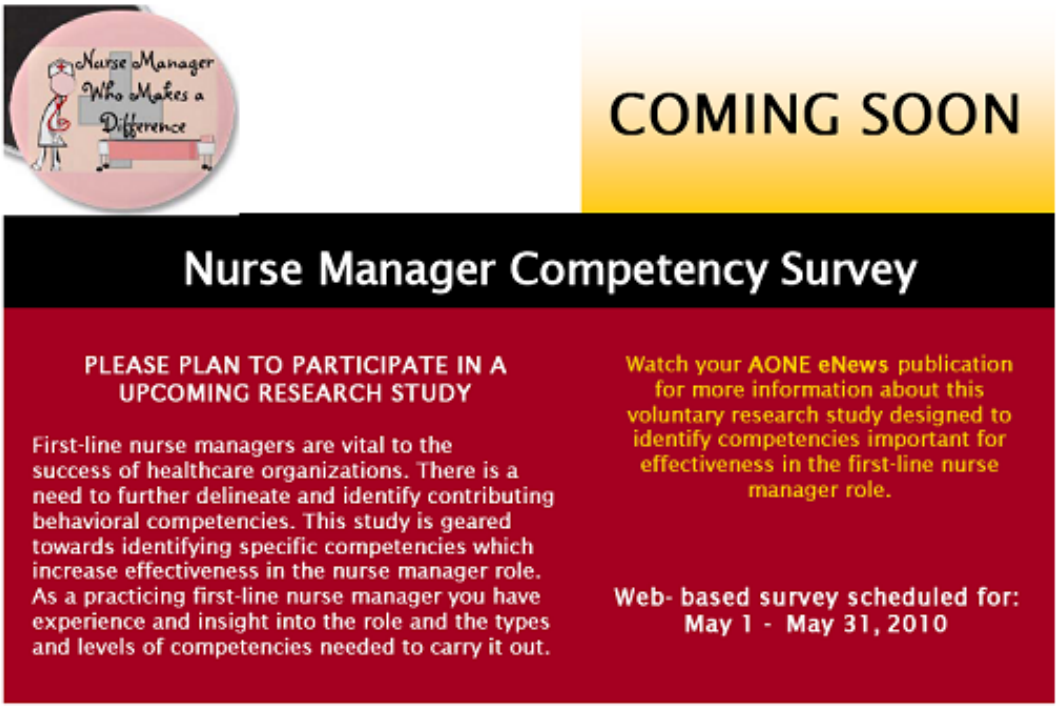
Consideration for the protection of confidentiality and informed consent of survey participants was maintained. Direct emails with the survey link located within the Web Surveyor tool was the source of soliciting information regarding nurse manager competencies. This served as a means for electronic confidential survey collection. Directions clearly stated that confidentiality would be strictly maintained and participation was voluntary. The investigator did not have any knowledge of nurse manager participant identity, therefore having no method of contacting them or knowledge of their organization of employment. Informed consent was accomplished by including cover letters outlining the purposed and significance of the study. (Appendix I)

Data Collection

The American Organization of Nurse Executives Organization (AONE) was contacted regarding the goals and aims of this study to elicit support and the organization agreed to facilitate recruitment of participants through email. Communication to the AONE affirmed that the study would be voluntary and included a cover letter regarding the purpose of the study with a disclaimer stating such.

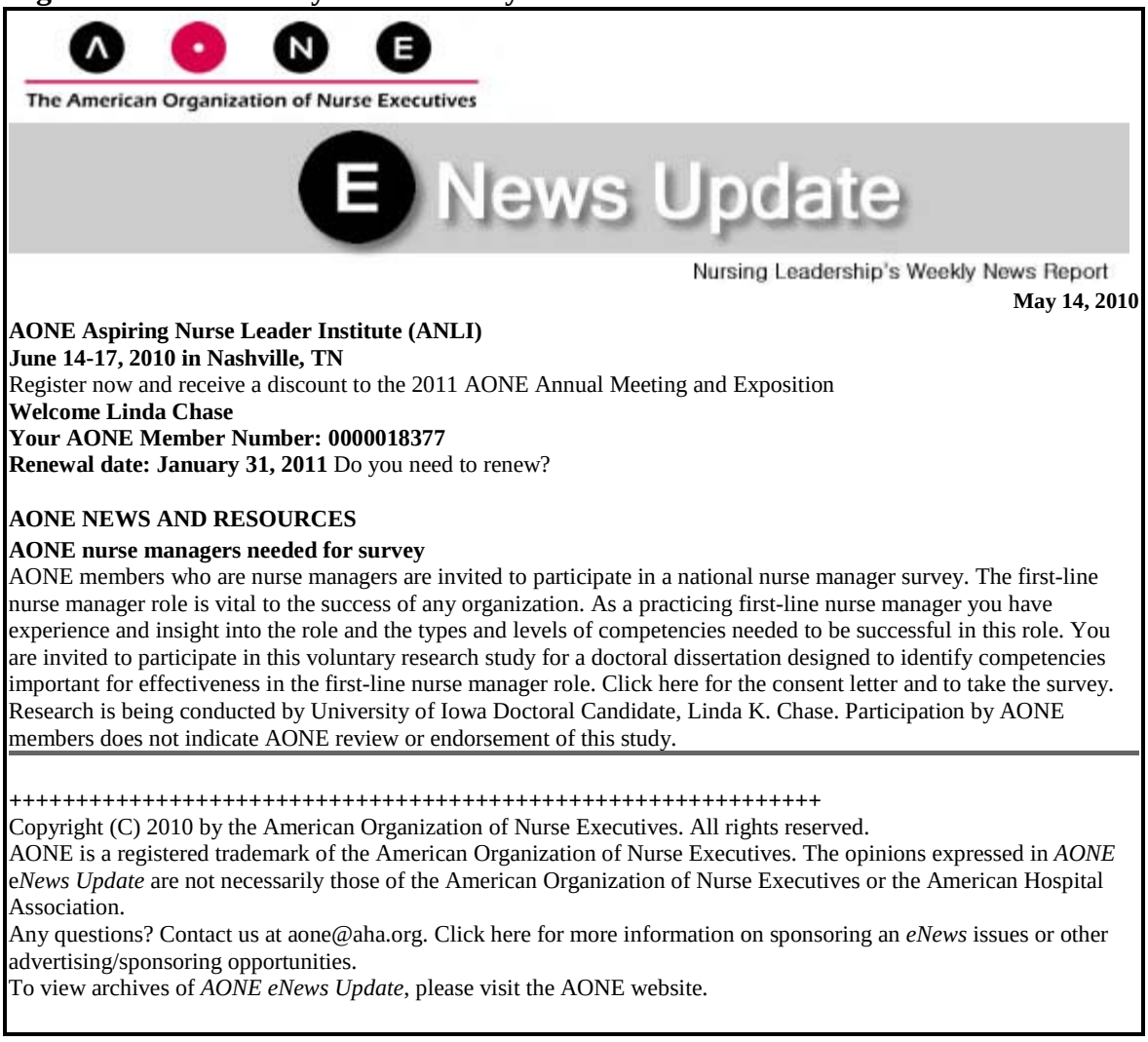
Each nurse manager received a pre- survey postcard alerting them to the upcoming study dates of May 1 to May 30, 2010. This was sent via the U.S. Postal Service to the address on file with AONE. It alerted potential participants to the upcoming survey and directed them to look for the upcoming AONE eNews web mailing during the month of May 2010. The post card is shown as Figure 3.

Figure 3 Survey "Coming Soon" Postcard



Potential participants received a communication from AONE announcing the study and included the consent letter as an attachment. The weekly eNews notification from AONE highlighted and announced the study and provided a link to the consent and web-survey for nurse managers interested in participating. The potential participant was provided instructions to open the attachment, read the consent letter, and click on the web-link to begin the survey. In pilot testing it was found that it took 30 minutes to complete the instrument.

Figure 4 AONE Weekly eNews Survey Notification



The American Organization of Nurse Executives

E News Update

Nursing Leadership's Weekly News Report

May 14, 2010

AONE Aspiring Nurse Leader Institute (ANLI)
June 14-17, 2010 in Nashville, TN
Register now and receive a discount to the 2011 AONE Annual Meeting and Exposition
Welcome Linda Chase
Your AONE Member Number: 0000018377
Renewal date: January 31, 2011 Do you need to renew?

AONE NEWS AND RESOURCES

AONE nurse managers needed for survey
AONE members who are nurse managers are invited to participate in a national nurse manager survey. The first-line nurse manager role is vital to the success of any organization. As a practicing first-line nurse manager you have experience and insight into the role and the types and levels of competencies needed to be successful in this role. You are invited to participate in this voluntary research study for a doctoral dissertation designed to identify competencies important for effectiveness in the first-line nurse manager role. Click here for the consent letter and to take the survey. Research is being conducted by University of Iowa Doctoral Candidate, Linda K. Chase. Participation by AONE members does not indicate AONE review or endorsement of this study.

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The survey data was collected via Web Surveyor which is a system actively managed for security and disaster recovery situations. Some aspects of the system are: operation system is backup to a system image daily; database is backup to a tape library daily; operating systems patches are applied on a monthly basis; web server and database server is located in a secure data center; communications to devices outside the campus is restricted by a local firewall; administrative access to the system is limited to a set of individuals that are responsible for maintaining the system. Data security was maintained at all times.

Data Analysis Plan

The next section will describe the analytic plan for each of the following research questions. The analytic plan for question #1) *What managerial competencies are perceived to be important for effectiveness as a 2010 nurse manager;* included the use of frequency distributions, measures of central tendency and variability to identify important skills and abilities.

In order to answer question #2) *Upon repeating the original 1994 nurse manager study, what changes in importance ratings of knowledge and ability competencies ratings by nurse managers will be noted*; a comparison of the knowledge and ability competencies from the original 1994 study and the 2010 study for each competency rating was compared using an effect size test to determine if there are significant similarities or differences in the ratings.

Question #3) *Are importance ratings of nurse manager competencies impacted by the organizational demographics (hospital size, magnet designation, and span of control) or by individual demographics (gender, age, education, years as an RN, tenure*

in management, and tenure in current position) in the repeat 2010 study; asks if perceptions of 2010 nurse manager competencies are related to hospital size, Magnet status, span of control, gender, age, education, years as an RN, tenure in management, and tenure in current position. Effect size correlations were used to measure associations that may exist among the skill category scores and the demographic variables.

The evaluation of the structure and psychometrics of the Chase Nurse Manager Competency Instrument were completed to further establish the reliability and validity of the instrument for question #4) Does *the Chase Nurse Manager Competency Instrument have reliable and valid psychometric properties to measure the technical, human, conceptual, leadership and financial management constructs*; construct validity was assessed using a factor analysis with a varimax rotation. This factor analysis was exploratory; as no guidance to the analysis software on the grouping of variables was provided. The goal of the factor analysis was to determine which items group together most strongly. Ideally, items cluster together into groups illustrating the identified constructs.

Conclusion

The purpose and goal of this study is to validate an instrument previously developed by the investigator, to repeat the study of nurse manager competencies and to compare and contrast contemporary findings with the previous 1994 study findings. The implications of studying nurse manager competencies includes the following: impact on patient care outcomes, impact on nursing leadership curriculum and education, impact on hiring practices, and impact on performance appraisals. This research adds knowledge about the nurse manager role building on the previous work of the investigator. It will

provide the next step in this investigator's program of research, which is to link nursing manager competencies with specific nurse sensitive outcomes. This will be made possible once the Chase Nurse Manager Competency Instrument is validated and then can be used to measure competencies and their impact on outcomes. The results of this research are addressed in Chapter 4.

CHAPTER IV

DATA ANALYSIS

The purposes of this study were to: 1) test the psychometric properties and validate the instrument previously developed by the investigator, 2) repeat the 1994 study of Nurse Manager Competencies, and 3) compare and contrast contemporary results with previous findings. The survey results from the study sample are reported in this chapter. The data from the online survey included demographic information and the ratings for each competency statement. Two open-ended questions provided respondents an opportunity to share opinions and make comments on the subject of nurse manager competencies.

Only AONE nurse manager members were eligible to take the survey. The AONE database was queried for the listings of all members with the words "nurse" and/or "unit" or "manager" in their title with the goal to select only nurse managers or unit managers from the database. The list was carefully reviewed for appropriateness of title, and any individual who was not in a role of Unit Manager, Nurse Manager or Clinical Nurse Manager was excluded from the pre- survey invitation to participate. The total number of participants provided by the AONE research director was 758. Once exclusions were made, 113 names were eliminated for a total sample of 645 eligible participants. Eighty-one nurse managers completed the online survey for a response rate of 13 %. No surveys were dropped due to large amounts of incomplete data.

Demographic Information

There were 81 respondents to the questionnaire which included 13 (16%) from small hospitals (25-199 beds), 22 (27%) from medium sized hospitals (200 to 399 beds),

and 46 (56.8%) from large sized hospitals (over 400 beds) (Table 7). Approximately half of the predominately female sample were from Magnet Hospitals (Table 8). The span of control for which the nurse managers have oversight varied, but 68% of respondents had supervisory responsibility for greater than 50 full-time employees (FTEs) (Table 9). Over 90% of the respondents were female (Table 10). The age of the respondents was from 25 to 55+ years with 7.4% in the 25-34 age group, 27% in the 35-44 age group, 42% in the 45-54 age group, and 23.5% in the 55+ age group (Table 11). Most of the nurse managers had baccalaureate (48%) and master's (37%) degrees and two respondents were doctorally prepared (2.5%). Ninety-six percent had a baccalaureate or higher degree, with 67% holding a master's degree or higher (Table 12). Ninety six percent of respondents had practiced nursing for ten or more years (Table 13), and 53% had been in a management position for longer than 5 years (Table 14). Fifty nine percent of the respondents had been in their current nurse manager position for longer than five years and it was noted that 75% had been in their nurse manager position for more than three years (Table 15). In summary, the nurse managers in the study were an experienced group of nurses in both clinical practice and management.

Table 7 Demographic Information - Hospital Size

Group	Hospital Size	Total Respondents	Percent
1 SM	1-24 beds	0	0.0
2 SM	25-49 beds	2	2.5
3 SM	50-99 beds	4	4.9
4 SM	100-199 beds	7	8.6
5 MED	200-299 beds	8	9.9
6 MED	300-399 beds	14	17.3
7 LG	400-499 beds	11	13.6
8 LG	500 or more beds	35	43.2
	Total	81	100.0

Table 8 Demographic Information - Magnet Hospital

Group	Total Respondents	Percent
Yes	39	48.1
No	42	51.9
Total	81	100.0

Table 9 Demographic Information - Span of Control

Group	Span of Control	Total Respondents	Percent
1	Less than 24 FTEs	10	12.3
2	25-49 FTEs	16	19.8
3	50-74 FTEs	27	33.3
4	75-99 FTEs	17	21.0
5	100 or more FTEs	11	13.6
	Total	81	100.0

Table 10 Demographic Information - Gender

Group	Total Respondents	Percent
Female	73	90.1
Male	8	9.9
Total	81	100.0

Table 11 Demographic Information - Age

Group	Age in Years	Total Respondents	Percent
1	Less than 25	0	0.0
2	25-34	6	7.4
3	35-44	22	27.2
4	45-54	34	41.9
5	55 or more	19	23.5
	Total	81	100.0

Table 12 Demographic Information - Education Level

Group	Educational Level	Total Respondents	Percent
1	Associate Degree	3	3.7
2	Diploma	0	0.0
3	Baccalaureate	22	27.1
4	Master's	54	66.7
5	Doctorate	2	2.5
	Total	81	100.0

Table 13 Demographic Information - Length of Time Practiced as RN

Group	Length of Time Practiced as RN	Total Respondents	Percent
1	Less than one year	0	0.0
2	1-2+ years	0	0.0
3	3-4+ years	0	0.0
4	5-9+ years	3	3.7
5	10 or more years	78	96.3
	Total	81	100.0

Table 14 Demographic Information - Management Experience

Group	Length of Time in Management Position	Total Respondents	Percent
1	Less than one year	7	8.6
2	1-2+ years	14	17.3
3	3-4+ years	17	21.0
4	5-9+ years	23	28.4
5	10 or more years	20	24.7
	Total	81	100.0

Table 15 Demographic Information - Length of Time in Current Position

Group	Length of Time in Current Position as a First-Line Manager	Total Respondents	Percent
1	Less than one year	7	8.7
2	1-2+ years	13	16.0
3	3-4+ years	13	16.0
4	5-9+ years	22	27.2
5	10 or more years	26	32.1
	Total	81	100.0

Presentation of Survey Findings for Question 1

The first research question was, "What managerial competencies are perceived to be important for effectiveness as a 2010 nurse manager?" To address this question nurse managers rated each competency statement using the following Likert scale; 4=Essential for first-line manager competence, 3=Contributes significantly to first-line manager competence, 2=Contributes moderately to first-line manager competence, and 1=Contributes minimally to first-line manger competence. The competency ratings assigned to each item by participants in the survey were totaled and the means and standard deviations were calculated. Higher scores on a competency statement meant the

item was viewed as important to nurse manager competency so the higher the mean score for an item the higher it was valued as important to this role.

There were a total of 106 competencies (53 knowledge and 53 ability) rated by participants and 99 of the competencies had mean ratings greater than or equal to 3.0, defined as contributing significantly to effectiveness for nurse manager competence. Only seven competencies had a mean rating less than 3.0 which was considered contributing moderately to effectiveness for nurse manager competence. In the knowledge category the range of means was 2.81 – 3.96, which was similar to the ability category that had a range of means from 2.59 – 3.99. The top rated competencies on the questionnaire were **effective communication** (item #12), **retention strategies** (item #15), **effective discipline** (item #16), and **practice standards** (item #1). The competency ratings and a ranking of the mean values identify important overall competencies for both knowledge and ability sections of the instrument for 2010 and 1994 study are reported in Tables 16 and 17. Frequency of the "4" rated (essential competencies) are illustrated in Tables 18 and 19.

Table 16 Competency Statement Ratings - 2010

		Knowledge and Understanding of					Ability to Implement and/or Use				
		N	Range	Mean	SD	Rank	N	Range	Mean	SD	Rank
	Technical										
1	Practice standards	81	2-4	3.88	0.399	3	81	2-4	3.65	0.574	19
2	Care delivery systems	81	2-4	3.65	0.550	23	81	2-4	3.51	0.615	35
3	Care planning	78	2-4	3.47	0.639	38	80	1-4	3.09	0.766	47
4	Clinical skills	77	1-4	3.65	0.580	24	80	1-4	3.05	0.794	48
5	Patient Acuity Systems	73	1-4	3.45	0.708	39	81	1-4	3.33	0.725	40
6	Infection control practices	80	2-4	3.83	0.444	11	80	2-4	3.59	0.610	27
7	Research and Evidence-based Practice	80	2-4	3.66	0.502	22	81	2-4	3.59	0.587	24
8	New technology	79	2-4	3.51	0.618	35	81	1-4	3.22	0.707	43
9	Case management	78	2-4	3.05	0.719	50	80	1-4	2.70	0.736	52
10	Information systems	78	2-4	3.56	0.524	31	81	2-4	3.52	0.573	33
11	Regulatory agency standards	80	3-4	3.84	0.371	8	81	2-4	3.75	0.488	13
	Human										
12	Effective communication	81	3-4	3.96	0.190	1	81	3-4	3.99	0.111	1
13	Effective staffing strategies	81	2-4	3.83	0.441	10	81	3-4	3.89	0.316	3
14	Recruitment strategies	81	2-4	3.54	0.613	34	79	2-4	3.57	0.634	30
15	Retention strategies	81	2-4	3.86	0.379	4	81	2-4	3.89	0.354	2
16	Effective discipline	78	3-4	3.91	0.288	2	81	2-4	3.88	0.367	7
17	Counseling strategies	80	3-4	3.85	0.359	6	81	2-4	3.88	0.367	6
18	Performance evaluation	80	3-4	3.86	0.347	5	79	3-4	3.87	0.335	8
19	Staff development strategies	79	2-4	3.62	0.562	27	81	2-4	3.59	0.543	25
20	Group process	80	2-4	3.58	0.546	31	81	2-4	3.51	0.573	34
21	Interviewing techniques	77	2-4	3.56	0.573	32	79	2-4	3.58	0.591	28
22	Team building strategies	80	3-4	3.74	0.443	16	81	3-4	3.77	0.426	12
23	Humor	79	2-4	3.58	0.546	28	80	2-4	3.59	0.589	26
24	Optimism	80	2-4	3.70	0.488	19	81	3-4	3.75	0.434	15

Table 16 continued

		Knowledge and Understanding of					Ability to Implement and/or Use				
		N	Range	Mean	SD	Rank	N	Range	Mean	SD	Rank
	Conceptual										
25	Nursing theories	80	1-4	2.81	0.731	53	81	1-4	2.59	0.667	53
26	Administrative theories	81	1-4	3.21	0.702	52	81	1-4	3.11	0.632	45
27	Strategic planning	80	2-4	3.48	0.636	37	81	2-4	3.43	0.611	37
28	Ethical principles	81	3-4	3.73	0.448	17	80	2-4	3.74	0.470	17
29	Teaching/learning theories	79	2-4	3.09	0.582	48	81	1-4	2.94	0.639	49
30	Political process and advocacy	78	1-4	2.97	0.702	51	81	1-4	2.89	0.689	50
31	Quality/Process improvement	78	2-4	3.72	0.481	18	81	3-4	3.80	0.401	10
32	Legal issues	80	2-4	3.41	0.630	42	81	2-4	3.35	0.655	39
	Leadership										
33	Decision-making	81	2-4	3.78	0.447	13	81	3-4	3.83	0.380	9
34	Power and empowerment	80	2-4	3.66	0.550	21	80	2-4	3.65	0.506	20
35	Delegation	81	3-4	3.78	0.418	12	81	2-4	3.75	0.462	14
36	Change process	78	2-4	3.74	0.468	15	80	3-4	3.80	0.403	11
37	Conflict resolution	81	2-4	3.84	0.402	7	79	3-4	3.89	0.320	4
38	Problem-solving	77	2-4	3.83	0.410	9	79	2-4	3.89	0.358	5
39	Stress management	79	3-4	3.76	0.430	14	80	2-4	3.75	0.464	16
40	Research process	81	2-4	3.06	0.659	49	80	1-4	2.80	0.604	51
41	Motivational strategies	79	1-4	3.54	0.616	33	80	1-4	3.56	0.613	31
42	Organization of unit work and workflow process	79	2-4	3.65	0.532	25	80	2-4	3.63	0.513	21
43	Policies and procedures	81	2-4	3.58	0.567	29	81	2-4	3.54	0.571	32
44	Staff education	80	2-4	3.38	0.603	43	80	2-4	3.20	0.604	44
45	Time management	78	1-4	3.68	0.614	20	81	1-4	3.70	0.601	18
46	Interdisciplinary coordination	81	2-4	3.37	0.580	44	81	1-4	3.28	0.637	41

Table 16 continued

		Knowledge and Understanding of					Ability to Implement and/or Use				
		N	Range	Mean	SD	Rank	N	Range	Mean	SD	Rank
	Financial Management										
47	Cost containment	81	1-4	3.49	0.615	36	81	1-4	3.59	0.608	23
48	Productivity measures	80	2-4	3.58	0.546	30	81	2-4	3.58	0.567	29
49	Operational & Capital Budget forecasting and generation	79	2-4	3.42	0.691	41	81	2-4	3.35	0.692	38
50	Cost benefit analysis	80	2-4	3.30	0.664	45	80	2-4	3.23	0.656	42
51	Unit budget control measures	81	2-4	3.63	0.535	26	81	2-4	3.60	0.540	22
52	Financial resource procurement	79	2-4	3.16	0.669	47	79	2-4	3.09	0.664	46
53	Financial resource monitoring	77	2-4	3.43	0.658	40	81	2-4	3.44	0.632	36

Table 17 Competency Statement Ratings – 1994

		Knowledge and Understanding of					Ability to Implement and/or Use				
		N	Range	Mean	SD	Rank	N	Range	Mean	SD	Rank
	Technical										
1	Practice standards	205	2-4	3.727	0.527	13	204	1-4	3.598	0.624	17
2	Care delivery systems	205	2-4	3.454	0.637	31	204	2-4	3.412	0.671	31
3	Care planning	204	1-4	3.250	0.750	39	205	1-4	3.063	0.829	44
4	Clinical skills	206	1-4	3.126	0.774	46	205	1-4	2.854	0.873	49
5	Classification systems	206	1-4	3.189	0.854	43	203	1-4	3.064	0.839	43
6	Infection control practices	207	1-4	3.300	0.735	37	205	1-4	3.215	0.743	38
7	Research based care practices	203	1-4	2.759	0.793	51	204	1-4	2.554	0.789	51
8	New technology	206	1-4	3.078	0.687	48	206	1-4	2.869	0.770	48
9	Case management	205	1-4	3.010	0.767	50	206	1-4	2.820	0.797	50
10	Information systems	206	1-4	3.262	0.698	38	205	1-4	3.190	0.759	40
11	Regulatory agency standards	205	1-4	3.663	0.576	19	205	1-4	3.615	0.621	15
	Human										
12	Effective communication	207	3-4	3.971	0.168	1	207	3-4	3.966	0.181	1
13	Effective staffing strategies	207	2-4	3.831	0.388	5	207	2-4	3.802	0.423	3
14	Recruitment strategies	207	24-	3.222	0.696	41	207	2-4	3.227	0.691	37
15	Retention strategies	206	2-4	3.680	0.508	18	206	2-4	3.641	0.538	13
16	Effective discipline	207	2-4	3.729	0.467	11	207	2-4	3.754	0.454	6
17	Counseling strategies	207	3-4	3.836	0.371	4	207	2-4	3.812	0.416	5
18	Performance evaluation	207	2-4	3.787	0.455	7	206	2-4	3.772	0.485	7
19	Staff development strategies	207	2-4	3.469	0.581	30	207	2-4	3.415	0.624	29
20	Group process	207	2-4	3.556	0.562	25	206	2-4	3.544	0.589	18
21	Interviewing techniques	206	2-4	3.471	0.638	29	207	2-4	3.507	0.630	25
22	Team building strategies	207	2-4	3.768	0.445	9	207	2-4	3.725	0.479	8
23	Humor	207	1-4	3.570	0.678	21	207	2-4	3.599	0.606	16
24	Optimism	206	2-4	3.728	0.498	12	206	2-4	3.709	0.525	9

Table 17 continued

		Knowledge and Understanding of					Ability to Implement and/or Use				
		N	Range	Mean	SD	Rank	N	Range	Mean	SD	Rank
	Conceptual										
25	Nursing theories	210	1-4	2.619	0.879	53	209	1-4	2.483	0.815	52
26	Administrative theories	208	1-4	3.207	0.702	42	209	1-4	3.086	0.748	42
27	Strategic planning	209	1-4	3.474	0.687	28	209	1-4	3.383	0.712	32
28	Ethical principles	210	1-4	3.524	0.628	27	210	1-4	3.452	0.664	28
29	Teaching/learning theories	210	1-4	3.029	0.698	49	210	1-4	2.967	0.715	47
30	Political process	210	1-4	3.090	0.793	47	210	1-4	3.014	0.810	46
31	TQM processes	210	1-4	3.557	0.586	24	209	1-4	3.512	0.605	20
32	Legal issues	210	1-4	3.452	0.664	32	208	1-4	3.346	0.719	34
	Leadership										
33	Decision-making	210	3-4	3.876	0.330	2	209	2-4	3.861	0.386	2
34	Power and empowerment	210	1-4	3.681	0.543	17	209	1-4	3.656	0.577	12
35	Delegation	210	2-4	3.781	0.437	8	209	2-4	3.775	0.441	6
36	Change process	210	2-4	3.752	0.475	10	209	2-4	3.694	0.539	10
37	Conflict resolution	210	3-4	3.824	0.382	6	209	2-4	3.823	0.395	3
38	Problem-solving	210	2-4	3.871	0.349	3	209	2-4	3.818	0.422	4
39	Stress management	210	1-4	3.605	0.612	20	209	1-4	3.522	0.687	19
40	Research process	210	1-4	2.648	0.782	52	206	1-4	2.481	0.788	53
41	Motivational strategies	210	2-4	3.543	0.603	26	209	2-4	3.498	0.644	26
42	Organization of unit work	209	1-4	3.560	0.610	23	207	1-4	3.493	0.630	27
43	Policies and procedures	210	1-4	3.419	0.660	34	209	1-4	3.368	0.689	33
44	Staff education	209	1-4	3.187	0.657	44	208	1-4	3.101	0.691	41
45	Time management	210	2-4	3.690	0.503	16	209	2-4	3.656	0.542	11
46	Interdisciplinary coordination	209	1-4	3.397	0.658	35	208	1-4	3.293	0.713	36

Table 17 continued

		Knowledge and Understanding of					Ability to Implement and/or Use				
		N	Range	Mean	SD	Rank	N	Range	Mean	SD	Rank
	Financial Management										
47	Cost containment	208	2-4	3.702	0.499	14	208	1-4	3.673	0.546	10
48	Productivity measures	208	1-4	3.447	0.650	33	207	1-4	3.415	0.662	30
49	Budget forecasting	207	1-4	3.565	0.578	22	208	1-4	3.510	0.614	24
50	Cost benefit analysis	206	1-4	3.233	0.701	40	207	1-4	3.198	0.727	39
51	Unit budget control measures	208	2-4	3.692	0.473	15	208	1-4	3.360	0.549	14
52	Financial resource procurement	207	1-4	3.140	0.760	45	207	1-4	3.029	0.818	45
53	Financial resource monitoring	207	1-4	3.386	0.694	36	207	1-4	3.300	0.749	35

Table 18 Frequency of Competency Statement "4" Ratings – 2010

		Knowledge and Understanding of		Ability to Implement and/or Use	
		N	Frequency of 4 Ratings	N	Frequency of 4 Ratings
	Technical				
1	Practice standards	81	73	81	57
2	Care delivery systems	81	56	81	46
3	Care planning	78	43	80	25
4	Clinical skills	77	53	80	25
5	Patient Acuity Systems	73	41	81	38
6	Infection control practices	80	68	80	52
7	Research and Evidence-based practice	80	54	81	52
8	New technology	79	45	81	30
9	Case management	78	22	80	9
10	Information systems	78	45	81	45
11	Regulatory agency standards	80	67	81	63
	Human				
12	Effective communication	81	78	81	80
13	Effective staffing strategies	81	69	81	72
14	Recruitment strategies	81	49	79	51
15	Retention strategies	81	71	81	73
16	Effective discipline	78	71	81	72
17	Counseling strategies	80	68	81	72
18	Performance evaluation	80	69	79	69
19	Staff development strategies	79	52	81	50
20	Group process	80	48	81	44
21	Interviewing techniques	77	46	79	50
22	Team building strategies	80	59	81	62
23	Humor	78	48	80	51
24	Optimism	80	57	81	61
	Conceptual				
25	Nursing theories	80	14	81	6
26	Administrative theories	81	29	81	20
27	Strategic planning	80	44	81	40
28	Ethical principles	81	59	80	60
29	Teaching/learning theories	79	17	81	13
30	Political process and advocacy	78	16	81	13
31	Quality / Process Improvement	78	57	81	65
32	Legal issues	80	39	81	36

Table 18 continued

		Knowledge and Understanding of		Ability to Implement and/or Use	
		N	Frequency of 4 Ratings	N	Frequency of 4 Ratings
	Leadership				
33	Decision-making	81	64	81	67
34	Power and empowerment	80	56	80	53
35	Delegation	81	63	81	62
36	Change process	78	59	80	64
37	Conflict resolution	81	69	79	70
38	Problem-solving	77	65	79	71
39	Stress management	79	60	80	61
40	Research process	81	20	80	7
41	Motivational strategies	79	47	80	49
42	Organization of unit work and workflow process	79	53	80	51
43	Policies and procedures	81	50	81	47
44	Staff education	80	35	80	24
45	Time management	78	58	81	62
46	Interdisciplinary coordination	81	34	81	30
	Financial Management				
47	Cost containment	81	44	81	52
48	Productivity measures	80	48	81	50
49	Operational & Capital Budget forecasting and generation	79	42	81	38
50	Cost benefit analysis	80	33	80	28
51	Unit budget control measures	81	53	81	51
52	Financial resource procurement	79	25	79	21
53	Financial resource monitoring	77	40	81	42

Table 19 Frequency of Competency Statement "4" Ratings - 1994

		Knowledge and Understanding of		Ability to Implement and/or Use	
		N	Frequency of 4 Ratings	N	Frequency of 4 Ratings
	Technical				
1	Practice standards	205	157	204	136
2	Care delivery systems	205	109	204	105
3	Care planning	204	88	205	71
4	Clinical skills	206	71	205	52
5	Classification systems	206	88	203	68
6	Infection control practices	207	94	205	81
7	Research based care practices	203	35	204	20
8	New technology	206	55	206	42
9	Case management	205	55	206	41
10	Information systems	206	82	205	78
11	Regulatory agency standards	205	146	205	139
	Human				
12	Effective communication	207	201	207	200
13	Effective staffing strategies	207	173	207	168
14	Recruitment strategies	207	78	207	78
15	Retention strategies	206	144	206	138
16	Effective discipline	207	153	207	158
17	Counseling strategies	207	173	207	170
18	Performance evaluation	207	167	206	165
19	Staff development strategies	207	106	207	101
20	Group process	207	122	206	122
21	Interviewing techniques	206	113	207	120
22	Team building strategies	207	161	207	153
23	Humor	207	136	207	137
24	Optimism	206	155	206	153
	Conceptual				
25	Nursing theories	210	34	209	20
26	Administrative theories	208	73	209	61
27	Strategic planning	209	119	209	106
28	Ethical principles	210	124	210	114
29	Teaching/learning theories	210	51	210	46
30	Political process	210	72	210	66
31	TQM processes	210	126	209	118
32	Legal issues	210	114	208	100

Table 19 continued

		Knowledge and Understanding of		Ability to Implement and/or Use	
		N	Frequency of 4 Ratings	N	Frequency of 4 Ratings
	Leadership				
33	Decision-making	210	184	209	183
34	Power and empowerment	210	150	209	147
35	Delegation	210	166	209	164
36	Change process	210	162	209	153
37	Conflict resolution	210	173	209	173
38	Problem-solving	210	184	209	174
39	Stress management	210	140	209	130
40	Research process	210	26	206	16
41	Motivational strategies	210	126	209	121
42	Organization of unit work	209	128	207	116
43	Policies and procedures	210	107	209	101
44	Staff education	209	67	208	58
45	Time management	210	149	209	144
46	Interdisciplinary coordination	209	101	208	88
	Financial Management				
47	Cost containment	208	150	208	147
48	Productivity measures	208	110	207	15
49	Budget forecasting	207	125	208	118
50	Cost benefit analysis	206	76	207	74
51	Unit budget control measures	208	145	208	137
52	Financial resource procurement	207	73	207	66
53	Financial resource monitoring	207	102	207	94

The sample perceived both knowledge of, and ability to carry out **effective communication** (item #12), **effective staffing strategies** (item #13), **retention strategies** (item #15), **effective discipline** (item #16) and to be the most significant skills necessary for nurse managers. Other competency items that were ranked high by nurse managers in both categories were **effective counseling strategies** (item #17), **constructive performance evaluation** (item #18), **conflict resolution** (item #37), and **problem solving** (item #38). These competencies were from the human and leadership sections of the survey instrument.

The lowest ranked competencies were composed of items primarily from the technical and conceptual sections of the instrument. **Nursing theories** (item #25) ranked lowest. In the knowledge category **political process and advocacy** (item #30) had the second lowest ranking. The third and fourth, lowest ranked competency items, **case management** (item #7) and **research process** (item #9) were the same in both categories. Other lower ranked competencies that were in both groups included **organizational theories** (item #26), **teaching/learning theories** (item #29), **staff education** (item #44), and **financial resource procurement** (item #52). Although these competencies were ranked lower overall they all had mean ratings greater than 2.0.

To summarize the answer to questions 1, the study sample perceived that 99 out of a possible 106 behavioral skills contributed in an important way to the job of a hospital-based nurse manager. Overall skills that were categorized as human or leadership skills were rated as most important for effectiveness in the nurse manager role, and technical and conceptual skills were rated as less important. Effective communication and effective discipline knowledge and ability were the highest ranked

skills, while case management and knowledge of nursing theories were the lowest ranked skills. All competencies had a mean rating over 2.59 in this research.

Presentation of Survey Findings for Question 2

The second question was “Upon repeating the original 1994 nurse manager study, what changes in importance ratings of knowledge and ability will be noted?” The results of the 2010 study analysis revealed that knowledge of and ability to implement and/or use effective communication was the top ranked competency item. The next highest competency rating was effective discipline and retention strategies. Effective communication was also the top rated item in the 1994 study. The second and third highest competency ratings differed from 1994 and include decision-making and problem-solving. Knowledge of nursing theories and ability to implement/and or use the research process were the lowest ranked competency items in both 1994 and 2010. Tables 20-21 and Table 22-23 illustrate the top ten highest ranked competency items for "Knowledge and Understanding" and "Ability to Implement and/or Use". Tables 24-25 and 26-27 illustrate the ten lowest ranked competency items for "Knowledge and Understanding" and "Ability to Implement and/or Use". The bolded italicized competency items illustrate those that were the same in both studies.

Table 20 Highest Knowledge and Understanding Competency Ratings - 2010

Category	Competency Items	Mean	Standard Deviation	Frequency of "4" Ratings
Human	***Effective Communication***	***3.96***	***0.111***	78
Human	Effective Discipline	3.91	0.288	71
Technical	Nursing Practice Standards	3.88	0.399	73
Human	Retention Strategies	3.86	0.379	71
Human	***Constructive Performance Evaluation***	***3.86***	***0.347***	69
Human	***Effective Counseling Strategies***	***3.85***	***0.359***	68
Leadership	***Conflict Resolution***	***3.84***	***0.402***	69
Technical	Regulatory Agency Standards	3.84	0.371	67
Leadership	***Problem-Solving***	***3.83***	***0.410***	65
Human	***Effective Staffing Strategies***	***3.83***	***0.441***	69

Table 21 Highest Knowledge and Understanding Competency Ratings - 1994

Category	Competency Items	Mean	Standard Deviation	Frequency of "4" Ratings
Human	***Effective Communication***	***3.97***	***0.168***	201
Leadership	Decision-Making	3.88	0.330	184
Leadership	***Problem-Solving***	***3.87***	***0.349***	184
Human	***Effective Counseling Strategies***	***3.84***	***0.371***	173
Human	***Effective Staffing Strategies***	***3.83***	***0.388***	173
Leadership	***Conflict Resolution***	***3.82***	***0.382***	173
Human	***Constructive Performance Evaluation***	***3.79***	***0.455***	167
Leadership	Delegation	3.78	0.437	166
Human	Team-building	3.77	0.445	161
Leadership	Change Process	3.75	0.475	162

Table 22 Highest Ability to Implement and Use Competency Ratings - 2010

Category	Competency Items	Mean	Standard Deviation	Frequency of "4" Ratings
Human	***Effective communication***	***3.99***	***0.111***	80
Human	Retention Strategies	3.89	0.380	73
Human	***Effective Staffing Strategies***	***3.89***	***0.320***	72
Leadership	***Conflict Resolution***	***3.89***	***0.358***	70
Leadership	***Problem-solving***	***3.89***	***0.367***	71
Human	***Effective Counseling Strategies***	***3.88***	***0.316***	72
Human	***Effective Discipline***	***3.88***	***0.462***	72
Human	***Constructive Performance Evaluation***	***3.87***	***0.335***	69
Leadership	***Decision-making***	***3.83***	***0.367***	69
Conceptual	Quality / Process Improvement	3.80	0.426	65

Table 23 Highest Ability to Implement and Use Competency Ratings - 1994

Category	Competency Items	Mean	Standard Deviation	Frequency of "4" Ratings
Human	***Effective communication***	***3.97***	***0.181***	200
Leadership	***Decision-making***	***3.87***	***0.386***	183
Leadership	***Conflict Resolution***	***3.82***	***0.395***	173
Leadership	***Problem-solving***	***3.82***	***0.422***	174
Human	***Effective Counseling strategies***	***3.81***	***0.416***	170
Human	***Effective Staffing Strategies***	***3.80***	***0.423***	168
Leadership	Delegation	3.78	0.441	164
Human	***Constructive Performance Evaluation***	***3.77***	***0.485***	165
Human	***Effective Discipline***	***3.76***	***0.454***	158
Human	Team-building	3.73	0.479	153

Table 24 Lowest Knowledge and Understanding Competency Ratings - 2010

Category	Competency Items	Mean	Standard Deviation	Frequency of "4" Ratings
Leadership	Interdisciplinary	3.37	0.580	34
Leadership	***Staff Education***	***3.37***	***0.603***	35
Financial	Cost Benefit Analysis	3.30	0.664	33
Conceptual	Administrative / Organizational Theories	3.21	0.702	29
Financial	***Financial Resource Procurement***	***3.16***	***0.669***	25
Conceptual	***Teaching/learning theories***	***3.09***	***0.582***	17
Leadership	***Research Process***	***3.06***	***0.659***	20
Technical	***Case Management***	***3.05***	***0.719***	22
Conceptual	***Political Process & Advocacy***	***2.97***	***0.702***	16
Conceptual	***Nursing Theories***	***2.81***	***0.731***	14

Table 25 Lowest Knowledge and Understanding Competency Ratings - 1994

Category	Competency Items	Mean	Standard Deviation	Frequency of "4" Ratings
Leadership	***Staff Education***	***3.19***	***0.657***	67
Financial	***Financial Resource Procurement***	***3.14***	***0.760***	73
Technical	Clinical Skills	3.13	0.774	71
Conceptual	***Political Process & Advocacy***	***3.09***	***0.793***	72
Technical	New Technology	3.08	0.687	55
Conceptual	***Teaching/learning theories***	***3.03***	***0.698***	51
Technical	***Case Management***	***3.01***	***0.767***	55
Technical	Research-based Care Practices	2.76	0.793	35
Leadership	***Research Process***	***2.65***	***0.782***	26
Conceptual	***Nursing Theories***	***2.62***	***0.879***	34

Table 26 Lowest Ability to Implement and Use Competency Ratings - 2010

Category	Competency Items	Mean	Standard Deviation	Frequency of "4" Ratings
Leadership	Staff Education	3.20	0.604	24
Conceptual	Administrative / Organizational Theories	3.11	0.632	20
Technical	***Nursing Care Planning***	***3.09***	***0.766***	25
Financial	***Financial Resource Procurement***	***3.09***	***0.664***	21
Technical	***Clinical Skills***	***3.05***	***0.794***	25
Conceptual	***Teaching / Learning Theories***	***2.94***	***0.639***	13
Conceptual	***Political Process & Advocacy***	***2.89***	***0.689***	13
Leadership	***Research Process***	***2.80***	***0.604***	7
Technical	***Case Management***	***2.70***	***0.736***	9
Conceptual	***Nursing Theories***	***2.59***	***0.667***	6

Table 27 Lowest Ability to Implement and Use Competency Ratings - 1994

Category	Competency Items	Mean	Standard Deviation	Frequency of "4" Ratings
Technical	***Nursing Care Planning***	***3.06***	***0.829***	71
Financial	***Financial Resource Procurement***	***3.03***	***0.818***	66
Conceptual	***Political Process & Advocacy***	***3.01***	***0.810***	66
Conceptual	***Teaching / Learning Theories***	***2.97***	***0.715***	46
Technical	New Technology	2.87	0.770	42
Technical	***Clinical Skills***	***2.85***	***0.873***	52
Technical	***Case Management***	***2.82***	***0.797***	41
Technical	Research-based Care Practices	2.55	0.789	20
Conceptual	***Nursing Theories***	***2.48***	***0.815***	20
Leadership	***Research Process***	***2.48***	***0.788***	16

It is important to describe the differences in overall ratings between the 2010 and 1994 studies. This was done by comparing the overall mean ratings of all competency categories by using standardized effect size analysis. Comparison of the 2010 higher

mean (3.54) with the 1994 mean (3.37) reveals the difference between importance ratings of the study samples having a medium effect of 0.65. (Table 28)

Table 28 Effect Size Analysis of Overall Competency Ratings

	N	Mean	SD	Standard error of mean
2010	81	3.54	0.26124	.02903
1994	211	3.37	0.35264	.02428

Interpretation: Small = .2, Medium= .5, Large= .8 (Cohen, 1998)

To summarize the comparison of the 1994 and 2010 study findings one must drill down to the differences in specific competency ratings. As noted in Tables 20 – 23 the competencies that emerged as those rating highest that are different in 2010 included four from the knowledge category including Effective Discipline, Nursing Practice Standards, Retention Strategies and Regulatory Agency Standards and one emerged from the ability category which was Quality/Process Improvement to total five different competencies. When comparing overall competency ratings of the two study samples, the 2010 respondents had higher overall importance ratings.

Presentation of Survey Findings for Question 3

The third research question was "Are importance ratings of nurse manager competencies impacted by the organizational demographics (hospital size, Magnet status, and span of control) or by individual demographics (gender, age, education, years as an RN, tenure in management, and tenure in current position) in the repeat 2010 study?" Effect size analysis was used to quantify relationships which existed among the pre-determined demographics of hospital size, Magnet status, span of control, gender, age, education, years as RN, tenure in management, and tenure in current position in rating knowledge and ability competencies. To examine the levels of the demographic

variables, Eta^2 as an effect size measures was calculated. Cohen's (Cohen, 1988) effect size guidelines for Eta^2 (.01 – Small; .06 – Medium; .14 – Large) were used to provide descriptors for the effect sizes observed.

Total Competency Ratings

Overall competency ratings were analyzed in both the knowledge and ability categories. In review of the overall knowledge competency ratings, the only variable that demonstrated a large effect was tenure in management (0.13). This was also true in the overall ability competency ratings at the same effect size (0.13). The nurse managers with greater tenure in management had higher overall ratings especially nurse managers with over five years of experience. Additionally age had a medium effect on overall ability ratings (0.07). The trend noted with age was that as the respondent's age increased so did the overall ability competency ratings. See Table 29 for all effect size statistics for the overall competency ratings.

Table 29 Eta-Square Effect Size Measures by Construct for the Demographic Variables, n = 81

Construct	Hospital Size (org)	Magnet (org)	Span of Control (org)	Gender (ind)	Age (ind)	Education (ind)	Tenure RN (ind)	Tenure in Management (ind)	Tenure in Current Position (ind)	Mean	S. D.
Tech Knowledge	0.02	0.03	0.05	<.01	0.03	0.04	<.01	0.07	0.03	3.6	0.32
Tech Ability	0.07	<.01	0.09	0.05	0.04	0.04	<.01	0.03	0.02	3.4	0.35
Human Knowledge	0.05	<.01	0.02	<.01	0.04	0.01	<.01	0.12	0.06	3.7	0.28
Human Ability	0.03	<.01	0.01	0.01	0.05	0.01	<.01	0.14	0.07	3.8	0.26
Conceptual Knowledge	0.01	0.01	0.03	<.01	0.04	0.03	<.01	0.07	0.03	3.3	0.42
Conceptual Ability	0.03	0.01	0.02	0.02	0.07	0.05	0.01	0.09	0.02	3.2	0.37
Leadership Knowledge	<.01	<.01	0.03	<.01	0.02	0.01	<.01	0.16	0.04	3.6	0.32
Leadership Ability	0.02	<.01	0.05	0.03	0.04	0.02	<.01	0.16	0.01	3.6	0.27
Financial Knowledge	<.01	0.01	0.06	<.01	0.06	0.02	<.01	0.13	0.02	3.4	0.49
Financial Ability	<.01	<.01	0.06	0.02	0.04	0.03	<.01	0.13	0.05	3.4	0.48
All Knowledge	<.01	<.01	0.04	<.01	0.04	0.02	<.01	0.13	0.03	3.6	0.30
All Ability	0.02	<.01	0.04	0.04	0.07	0.02	<.01	0.13	0.04	3.5	0.25

Mean score = 4-Essential; 3-Significant; 2-Moderate; 1-Minimal
Effect size (Eta^2; 0.01-Small; 0.06-Medium; 0.14-Large)

Technical Knowledge and Ability

Technical knowledge and ability ratings were affected by hospital size, tenure in management, and span of control of the nurse manager. Age, tenure as an RN, and years in current position had minimal impact on technical competency ratings by nurse managers. Magnet status, gender and education also had no effect on ratings.

Nurse managers from small sized (1-199 beds) hospitals had higher ratings of technical ability (mean=3.58) than nurse managers in the medium and large hospitals. Tenure in management was noted to impact the technical knowledge concept of nurse mangers with more years of experience. Those with five or greater years of management experience (5-9 years, mean=3.82 > 10 years, mean=3.84) had higher ratings. Span of control impacted the effect of nurse manager's ratings on technical ability. Nurse managers with 25 to 49 FTEs rated technical ability higher (mean=3.57). The mean ratings are shown in Table 30.

Table 30 Technical Construct

Hospital Size (Org)	Technical Knowledge Construct		Technical Ability Construct	
	Mean	Standard Deviation	Mean	Standard Deviation
1-199 beds	3.64	0.27	3.58	0.32
200-399 beds	3.65	0.27	3.35	0.40
400 or greater beds	3.57	0.35	3.31	0.32
Total	3.60	0.31	3.37	0.35
Span of Control (Org)	Technical Knowledge Construct		Technical Ability Construct	
	Mean	Standard Deviation	Mean	Standard Deviation
<25	3.58	0.29	3.38	0.33
25-49	3.72	0.29	3.57	0.38
50-74	3.62	0.29	3.30	0.39
75-89	4.53	0.36	3.32	0.28
100>	3.50	0.36	3.30	0.26
Total	3.60	0.31	3.37	0.35
Tenure in Management (Years) (Ind)	Technical Knowledge Construct		Technical Ability Construct	
	Mean	Standard Deviation	Mean	Standard Deviation
<1	3.61	0.27	3.63	0.24
1-2	3.62	0.36	3.65	0.36
3-4	3.66	0.27	3.68	0.29
5-9	3.82	0.19	3.79	0.17
10 or greater	3.84	0.27	3.88	0.15
Total	3.74	0.28	3.75	0.25

Human

Hospital size, respondent age, tenure in RN practice, education, Magnet status, gender, and span of control had minimal impact on the human skill ratings. Management experience and tenure in current nurse manager position did impact human skill ratings. Management experience affected competency ratings related to human knowledge and ability. Respondents with increasing years of management experience rated human knowledge and ability competencies higher. The same phenomenon was true for nurse

manager position tenure in rating human ability competencies. The mean ratings are shown in Table 31.

Table 31 Human Construct

Tenure in Management (Years) (Ind)	Human Knowledge Construct		Human Ability Construct	
	Mean	Standard Deviation	Mean	Standard Deviation
<1	3.61	0.27	3.63	0.24
1-2	3.62	0.36	3.65	0.36
3-4	3.66	0.27	3.68	0.29
5-9	3.82	0.19	3.79	0.17
10 or greater	3.84	0.27	3.88	0.15
Total	3.74	0.28	3.75	0.25
Tenure in Current Position (Ind)	Human Knowledge Construct		Human Ability Construct	
	Mean	Standard Deviation	Mean	Standard Deviation
< 1	3.64	0.26	3.62	0.24
1 - 2	3.71	0.34	3.69	0.37
3 - 4	3.65	0.32	3.69	0.34
5 - 9	3.82	0.19	3.79	0.17
10 or greater	3.75	0.29	3.82	0.19
Total	3.74	0.28	3.75	0.25

Conceptual

Analysis of conceptual knowledge and ability indicated medium effect between the perceptions of nurse mangers in importance ratings by age, and length of tenure in management. Gender, length of time in practice as an RN and length of time in current position did not affect conceptual importance ratings. Hospital size, span of control, tenure as an RN, Magnet status and education also had minimal impact on ratings.

Conceptual ability was rated differently depending on the respondent's age. Mean ratings for both conceptual ability increased with respondent age. The nurse manager group 55+ years of age had a higher mean rating (mean=3.39) of conceptual ability than nurse managers in younger age groups.

Lastly, the length of time in management was a variable that caused differences in importance ratings of conceptual knowledge and conceptual ability categories. In ranking conceptual knowledge the 1 to 2 years of experience group rated conceptual knowledge lower (mean=3.62) than those with 3 to 4 years of experience (mean=3.66), those with 5-9 years of experience (mean=3.82) and those with over 10 years of experience (mean=3.84) in their current position. In ranking importance of conceptual ability, the same trend was noted as the 1 to 2 year experience group (mean=3.65) had significantly lower mean ratings again from the 3 to 4 year experience group (mean=3.68), the 5 to 9 year experience group (mean=3.79) and those with over 10 years of experience (mean=3.88).

In summary, only the variables of age, and management tenure affected conceptual competency ratings. Nurse managers had increasing ratings as their age and management experience increased in the conceptual knowledge and ability constructs. The mean ratings are shown in Table 32.

Table 32 Conceptual Construct

Age (Ind)	Conceptual Knowledge Construct		Conceptual Ability Construct	
	Mean	Standard Deviation	Mean	Standard Deviation
25-34	3.30	0.13	3.06	0.17
35-44	3.36	0.39	3.23	0.34
45-54	3.22	0.49	3.17	0.34
55 or greater	3.41	0.38	3.39	0.35
Total	3.31	0.42	3.23	0.37
Tenure in Management (Years) (Ind)	Conceptual Knowledge Construct		Conceptual Ability Construct	
	Mean	Standard Deviation	Mean	Standard Deviation
<1	3.61	0.27	3.63	0.24
1-2	3.62	0.36	3.65	0.36
3-4	3.66	0.27	3.68	0.29
5-9	3.82	0.19	3.79	0.17
10 or greater	3.84	0.27	3.88	0.15
Total	3.74	0.28	3.75	0.25

Leadership

Leadership knowledge and ability were highly rated overall by nurse managers. Tenure in management had a large effect on the perceived importance of leadership knowledge and ability. All other variables had minimal impact on the importance ratings.

Large effect differences were found in the importance ratings of leadership knowledge and leadership ability, depending on the management experience of the respondents. Mean ratings increased as management experience increased for both leadership knowledge and ability competencies. The mean ratings are shown in Table 33.

Table 33 Leadership Construct

Tenure in Management (Years) (Ind)	Leadership Knowledge Construct		Leadership Ability Construct	
	Mean	Standard Deviation	Mean	Standard Deviation
<1	3.54	0.30	3.57	0.23
1-2	3.43	0.38	3.46	0.27
3-4	3.50	0.36	3.47	0.33
5-9	3.74	0.22	3.67	0.21
10 or greater	3.73	0.29	3.71	0.23
Total	3.62	0.32	3.59	0.27

Financial Management

The variables that affected competency items in the financial management category were management tenure and span of control. Education, tenure as an RN, tenure in current position, hospital size, age, Magnet status and gender had little effect. Nurse managers' tenure in management affected both ratings of financial management knowledge and ability. Nurse managers with 1 to 2 years in their current position had lower ratings in the financial knowledge (mean=3.17) and ability (mean=3.19) categories than the respondents' with more than 10+ years of experience for financial management knowledge and ability ratings (mean=3.69, mean=3.67). Span of control impacted financial management knowledge. Mean ratings of nurse managers supervising 50 to 74 FTEs were higher (mean=3.56) than those with more or less FTEs.

In summary, management tenure and span of control were the only variables that affected financial management importance ratings. Managers with greater experience viewed competencies as more important in financial management. Span of control had medium effect on financial knowledge. See Table 34 for mean values.

Table 34 Financial Construct

Span of Control (Org)	Financial Knowledge Construct		Financial Ability Construct	
	Mean	Standard Deviation	Mean	Standard Deviation
<25	3.27	0.57	3.19	0.53
25-49	3.50	0.48	3.50	0.37
50-74	3.56	0.48	3.51	0.48
75-89	3.36	0.47	3.38	0.48
100>	3.27	0.51	3.31	0.54
Total	3.43	0.49	3.42	0.48
Tenure in Management (Years) (Ind)	Financial Knowledge Construct		Financial Ability Construct	
	Mean	Standard Deviation	Mean	Standard Deviation
<1	3.27	0.48	3.27	0.40
1-2	3.17	0.53	3.19	0.48
3-4	3.39	0.48	3.33	0.48
5-9	3.44	0.50	3.44	0.49
10 or greater	3.69	0.39	3.67	0.39
Total	3.43	0.49	3.42	

Summary of Variable Effects on Categories

Of the organizational variables, hospital size and span of control were the only ones which impacted the nurse manager competency ratings. Interestingly, the Magnet variable did not impact on competency ratings suggesting that Magnet status does not change the skill needs of nurse managers. Hospital size had a medium effect on the technical ability construct (0.07) as did span of control (0.09). Smaller sized hospitals and nurse managers with a smaller span of control rated the need for technical ability competencies as more important. This may be due to the need for more of these skills when working in smaller entities where there may be fewer resources available to enhance these skills. Span of control was also noted to be an organizational variable having a medium effect on financial management knowledge (0.06) and ability (0.06)

ratings with higher perceived importance given by managers with 50-75 FTEs. The reason for this is unclear. One could speculate that nurse managers with more FTEs may have more financial management responsibility thus rating these competencies as more important but this was not the case with this study sample.

Of the individual variables, gender, education, and year of tenure as an RN had minimal impact on importance ratings of any of the competency categories. However, age, tenure in management, and tenure in current position did impact perceived importance of competency ratings. Age impacted the importance ratings of the conceptual ability category (0.07) with nurse managers in the 55+ year category having higher ratings. Financial management knowledge (0.56) was also noted to be impacted by age slightly with the same phenomenon in the 55+ year category. An explanation for this is not understood beyond the understanding that overall the variable of age impacted all ability categories (0.07) in the same way in that those in older age groups had a higher appreciation of competency abilities.

A finding of this study is that the individual variables of management experience impacted all competency categories except for technical ability (0.03) with medium and large effects. The impact of management tenure is noted in the constructs as follows:

Technical Knowledge- 0.06

Human Knowledge- 0.12

Conceptual Knowledge- 0.07

Leadership Knowledge- 0.16

Financial Management Knowledge- 0.13

All Knowledge- 0.13

Technical Ability- 0.03

Human Ability- 0.14

Conceptual Ability- 0.09

Leadership Ability- 0.16

Financial Management Ability- 0.13

All Ability- 0.13

The consistent phenomenon in all the categories was that nurse managers rated competencies higher as their management tenure increased. Those with more management experienced rated all competency categories higher demonstrating the greater appreciation of the knowledge and skills due to their experience in the role. It should be noted that the number of respondents in the study were distributed as expected with most having been in management over 2 years; (less than one year= 7, 1-2+ years= 14, 3-4+ years= 17, 5-9+ years= 23, and 10 or more years= 20). The high appreciation of the human, conceptual, leadership and financial management constructs in nurse mangers with more management experience forms the basis of understanding how important these knowledge constructs and behavioral abilities are in the role. By understanding the importance of these competencies as perceived by these tenured nurse managers one can formulate the development of these skills while noting that there needs to be a conscious effort to provide a continuum and ongoing focus in the development of nurse manages. It is also important to note that one can never underestimate how these skill categories are impacted by management experience.

Length of time in the manager's current position impacted the human knowledge (0.06) and human ability (0.07) categories. Similar to the importance ratings of overall management experience, the nurse managers with more tenure in their current role rated the human competencies higher. A similar explanation as with management tenure may exist in this finding in that those managers with more experience in their current role appreciate the importance of relationships and the human factors necessary to be successful in the role. This validates the critical importance of the human competencies

that have been identified as critical since the original 1994 study and underscores that these same key competencies remain essential 14 years later in 2010.

Presentation of Findings for Study Question 4

The fourth research question was "Does the Chase Nurse Manager Competency Instrument have reliable and valid psychometric properties to measure the technical, human, conceptual, leadership and financial management constructs?" Two methods of analysis were conducted on the instrument in this regard; the first was a Cronbach's analysis to determine internal consistency of the instrument. The second was a factor analysis to determine correlations between the constructs and unobserved variables. The following discussion reports these two findings.

Cronbach's Analysis

A Cronbach's alpha analysis was done to assess reliability of the instrument. In the 1994 study, this analysis was not completed. However, the data had been kept by the investigator and was analyzed simultaneously with the 2010 data analysis. Each data set had all constructs analyzed for internal consistency.

The diagnostic measure of reliability coefficient that assesses the internal consistency of the entire scale is Cronbach's alpha as the most widely used measure. The generally agreed upon lower limit for Cronbach's alpha is 0.70 (Hair, et. al, 2006). One issue in assessing Cronbach's alpha is its positive relationship to the number of items in the scale. All knowledge and ability constructs in the 1994 and 2010 studies were analyzed, and all were found to have a Cronbach's alpha value greater than 0.70, indicating inter-item correlation of the constructs of the Chase Nurse Manager Instrument. (Table 35)

In review of the Cronbach's alpha analysis it is important that in both the 1994 and 2010 overall knowledge ratings were 0.941 and 0.950 respectively. In the overall ability ratings, a similar trend was noted with the 1994 rating as 0.933 and the 2010 rating as 0.909.

Table 35 Cronbach's Analysis

Category	N = items in category	2010	1994
Technical Knowledge	11	0.778	0.901
Technical Ability	11	0.743	0.894
Human Knowledge	13	0.872	0.952
Human Ability	13	0.813	0.950
Conceptual Knowledge	8	0.826	0.818
Conceptual Ability	8	0.756	0.792
Leadership Knowledge	14	0.883	0.904
Leadership Ability	14	0.803	0.915
Financial Knowledge	7	0.892	0.921
Financial Ability	7	0.876	0.925
All Knowledge	53	0.950	0.941
All Ability	53	0.909	0.933
All Knowledge and Ability	106	0.954	0.965

Factor analysis

The data reduction technique of Principal Components Analysis was used to identify latent components in the data. Based upon research conducted in 1994 with the same instrument, five components were extracted using a salient cutoff value of 0.40. Varimax rotation was used to help in the interpretation of these components. Table 36 shows the results of the analysis with component loadings, communalities, variance extracted per component, percent of total variance extracted per component, and Cronbach's alpha coefficient for each component. These variables included the five competency constructs, technical, human, conceptual, leadership and financial management.

Table 36 Rotated Component Matrix (Varimax Rotation), n=81

	Components					
Item	**Technical**	**Human**	**Conceptual**	**Leadership**	**Financial Management**	**Communality**
FINMON1 – Financial Resource Monitoring					.790	.801
FINPROC1 – Financial Resource Monitoring					.788	.713
COSTANAL1 – Cost Benefit Analysis					.776	.672
FORECAST1 – Unit Budget Forecasting/Generation					.757	.638
BUDGEMEAS1 – Unit Budget Control Measures					.739	.624
CARE1 – Nursing Care Planning					.660	.531
ADMTHE1 – Administrative / Organizational Theories				.400	.652	.705
RES1 – Research and Evidence-based Practice					.598	.559
GROUP1 – Group Process		.492			.590	.635
NURTHE1 – Nursing Theories					.583	.529
DEL1 – Nursing Care Delivery Systems				.415	.549	.602
PLAN1 – Strategic Planning					.537	.516
POL1 – Political Process and Advocacy					.531	.416
TIME1 – Time Management			.821			.747
COST1 – Cost Containment and Cost Avoidance			.779			.769
INTER1 – Interviewing Techniques			.735			.684

Table 36 – continued

	Components					
	Technical	**Human**	**Conceptual**	**Leadership**	**Financial Management**	**Communality**
STAF1 – Effective Staffing Strategies			.670			.526
PROB1 – Problem-solving			.668			.494
RECRUIT1 – Recruitment Strategies			.667			.639
MOT1 – Motivation Strategies			.650			.643
RETENT1 – Retention Strategies			.609			.420
TEAM1 – Teambuilding Strategies			.597	.495		.665
TQM1 – Quality / Process Improvement			.533			.514
RESPRO1 – Research Process			.490		.413	.557
PROD1 – Productivity Measurements			.473	.401	.469	.607
TEACH1 – Teaching / Learning Theories				.789		.714
POWER1 – Power and Empowerment				.755		.613
DEC1 – Decision-making				.726		.626
OPT1 – Optimism		.470		.617		.682
CHANGE1 – Change Process				.608		.581
DELEG1 – Delegation			.528	.586		.738
CONF1 – Conflict Resolution				.548		.426

Table 36 - continued

	Components					
	Technical	**Human**	**Conceptual**	**Leadership**	**Financial Management**	**Communality**
TECH1 – New Technology				.544	.526	.713
HUMOR1 – Humor				.544		.573
COORD1 – Interdisciplinary Care Coordination				.535		.536
STAFFED1 – Staff Education				.471		.329
ETHIC1 – Ethical Principles				.445		.498
INFO1 – Information Systems and Computers						
DISC1 – Effective Discipline		.790				.722
COUNS1 – Effective Counseling Strategies		.774				.623
DEV1 – Staff Development Strategies		.720				.641
COMM1 – Effective Communication		.644				.423
STRESS1 – Stress Management		.519				.454
EVAL1 – Constructive Performance Evaluation		.513				.390
REG1 – Regulatory Agency Standards	.798					.701
CLIN1 – Clinical Skills	.730					.640
INF1 – Infection Control Practices	.717					.562
ORG1 – Organization of Unit of Work	.520		.464			.541

Table 36 – continued

	Components					
	Technical	**Human**	**Conceptual**	**Leadership**	**Financial Management**	**Communality**
LEGAL1 – Legal Issues	.487					.508
CASE1 – Case Management	.483					.533
POLICY1 – Policy and Procedures	.474					.448
PRACT1 – Nursing Practice Standards	.470					.338
CLASS1 – Patient Acuity Systems						
Sum of Squared Loadings (Eigenvalue)	4.2	4.6	7.0	6.6	7.9	30.3
Percent Total Variance	7.9	8.7	13.2	12.5	14.9	
Percent Trace	14.0	15.2	23.1	22.0	26.1	
Cronbach's Alpha	.78	.79	.89	.89	.92	

Content Analysis

Content analysis from written comments suggested the need for additional behavioral competencies including competencies related to patient satisfaction, implementation skills, flexibility, and patience. The comments made by the respondents to the open ended statement "Please list any other competencies that you believe are important for the first-line nurse manager."

Written comments from the study participants provided richness to the study in regard to their candid reviews of important knowledge and skills necessary for the nurse manger role. The comments made by the respondents to the open ended statement "Please list any other competencies that you believe are important for the first-line nurse manager" are grouped below. The summary of comments were categorized in Table 37 based on the Katz conceptual framework. (Technical, Human, Conceptual, Leadership, Financial Management)

Table 37 Construct Themes from Open-Ended Comments

Technical	Human	Conceptual	Leadership	Financial Management
Evaluation of clinical practice	Crucial conversations and effective coaching skills	Succession planning, strategic planning	Open for change, open door policy, being fair	Draft a business plan
Patient satisfaction	Generational differences and understanding-how to work with a variety of generations.	Learning how to navigate hospital politics	Ability to think forward and try to stay ahead of the curve	
	Relationship building	Personal alignment with organizational mission and vision	Problem-solving at the staff level	
	Listening skills, empathy, people skills		Ability to enact shared governance models to support change	
	Nurse managers have to lead with their heart as well as their head. It is critical to know when to use what. And to recognize that staff members responds first and foremost to kindness.		Flexibility	
			Patience	
			Overall common sense, critical thinking skill, and understanding of the job	
			Multi-tasking and time management	

The analysis of these data has included the descriptions of key findings of the study. The most impactful insight that can be gleaned from these results is that an overwhelming number of nurse manager competencies are necessary in today's healthcare environment to carry out the role successfully. While there has been shifting of importance ratings of competencies since 1994, the importance of communication is constant. While the highest ranked competency statements were similar in 1994 and 2010, the findings (mean ratings) were different in 1994 as in 2010 noting the 2010 overall ratings were higher and the impact was a medium effect (0.65).

The reliability of the Nurse Manager Competency Instrument was also established based on a series of diagnostic measures including test / retest, Cronbach's alpha and exploratory factor analysis. The recommendations based on the findings of this study are discussed in Chapter 5.

CHAPTER V

DISCUSSION and CONCLUSIONS

This chapter contains a summary of the findings, discussion of the results and limitations of the research. It also discusses suggestions for assisting nurse managers new to the role and has implications for practice, research and education.

Discussion

Nurse managers play pivotal roles in creating healthy work environments and engaging staff nurses within the practice setting. This study explored the nature of nurse manager work to provide an understanding of the skills and competencies necessary in the role. Building on a previous 1994 descriptive study, this investigator set out to describe the in-depth knowledge and skills required by contemporary nurse managers in 2010. A secondary aim was to update and perform psychometric testing on the 1994 Chase Nurse Manager Competency Instrument so that it can continue to be used by others to plan and evaluate programs for nurse managers.

The conceptual framework of this study was based on the Katz (1955) classic model of a three categorical approach incorporating technical, human and conceptual categories and the basic underpinning that skills within each category can be learned and developed. This was the same framework used in the original 1994 development of the Chase Nurse Manager Competency Instrument. This conceptual framework provided the structural categories during the 1994 literature review in which the competency statements were then categorized in the instrument. Since 1994 several other authors and researchers have cited this framework and utilized the instrument.

The original 1994 Chase Nurse Manager Instrument was developed separately but has parallels to the 2005 Leadership Collaborative of AONE as noted in the crosswalk in Chapter 2. The significance of the overlap and similarities of the competencies identified in each of these studies provides validity and creates the basis for developmental focus for these important nurse leaders.

The literature review in 2010 yielded an update in the knowledge related to the nurse manager role and competencies needed to carry it out. There was no doubt in 1994 that the role was emerging as pivotal, but the update of the literature review in 2010 illustrated the increasing emphasis on the nature of the role and impact on organizational performance. The evolution of the different competencies necessary in today's current healthcare environment were noted to be anchored in the human and leadership sectors of knowledge and skills needed. Although it was noted in 1994 that effective communication was the highest rated competency, what has emerged in the past decade is that the same strength in communication skills is needed but at an even more intensified level. The importance of influential communication, of having crucial conversations and possessing emotional intelligence in writing proposals, leading teams, and providing feedback loops to staff is critical in the current healthcare system to bridge the gap with staff and management.

The methodology of the study included gaining knowledge from a cadre of 53 AONE Nurse Manager Fellow experts who reviewed the instrument in 2010 and added insight and recommendations to the nomenclature of the 53 competency statements resulting in a more contemporary instrument. Eighty one AONE nurse managers were

the purposeful sample solicited via a web-based survey. They provided quantitative ratings in addition to comments regarding the subject of nurse manager competencies.

Strengths

A primary strength of the study includes the retesting of validity of the Chase Nurse Manager Competency Instrument by a field study of key stakeholder nurse managers (AONE Fellows) themselves. Using expert nurse managers to articulate what they believed to be meaningful competencies statements added to clarity and refinement of the nurse manager instrument.

Additionally the study sample itself of nurse managers is viewed as a strength. Consideration was given to using others as experts, but those actually in the roles from a variety of settings was considered the most direct and transparent group to solicit this information. AONE is a credible organization with an established value system of the nurse manager role based on the organization's own research. It is also an organization known for its dedication to this cadre of membership and their development. It is believed that AONE nurse manager members view role development as an important part of their active participation in a professional administrative organization.

Another strength of the study was the use of the Katz conceptual framework as the foundational theory for the research. This classic framework from the business literature provided a useful definition of competency for the study and suggests that the competencies become increasingly overlapping as the complexity of the job increases. It was also noted that the Katz framework had parallels to the 2005 AONE review of nurse manger competencies in terms of categorical similarities and the overlapping nature of constructs with a leadership core.

Lastly a strength of the study and testing of the psychometric properties of the instrument occurred due to the repeat nature of the study from 1994. The investigator had retained the raw data from the 1994 survey so that comparisons could be made. The raw data from 1994 and 2010 were used to validate the properties of the instrument using statistical Cronbach's and Factor analysis.

Weaknesses

The primary weakness of the 2010 study was the sample size of only 81 respondents. This may have been contributed to by the web-based design of soliciting participants in that they did not passively receive a dedicated personal email to notify them of the study occurring. Rather solicitation of study participants occurred by the nurse manager noting (took active action on their part) that the study period was open on the AONE Friday mailing.

A secondary weakness of the study was that the sample only came from the AONE membership directory. This representation from a specific cluster of sample individuals may have been limited in their homogeneity due to the fact of their similar characteristics and less diversity. It was noted that approximately 50% of the study sample was from Magnet organizations which is an over representation of the general population of nurse managers since only 5% of all hospitals have this designation (ANCC, 2008)

Findings

The findings of the study noted both similarities and differences in perceived importance of nurse manager competencies have occurred since the original 1994 study. This paints the landscape with regard to outlining the foundational elements of this key

role while also filling in the lines with the description of the select knowledge and skill competencies necessary in the role.

The key similarities noted in the 2010 study as compared to the 1994 study is that out of the 106 competency statements the majority had ratings greater than three on a four point scale. The human and leadership skills of effective communication and decision-making remain constant. The changes noted in 2010 were the emergence of the knowledge and skills related to retention strategies and staffing strategies. Interestingly retention strategies were not in the top rated competencies in 1994. Another change is the emergence of the need for necessary knowledge and skills needed to effectively perform quality improvement processes which came through in both the quantitative and qualitative responses. This evolution is noted to be in response to individual and organizational factors in addition to internal and external forces impacting the complexity of the role. There is little doubt that the rapid cycles of change, increased acuity of patients and larger spans of control have contributed to the complexity of care in hospital settings today.

It is important to explore the possible reasons for this shift in perceived importance. One might consider that the competency related to discipline may have received higher ratings due to the increase in unionization in today's healthcare environment. This may be a factor in addition to the increasing needs for assessing and monitoring performance of staff and the complexity of human resource issues related to disciplinary standards especially in unionized environments.

Nursing practice standards also were identified as the third highest knowledge competency in 2010. The potential trend in practice during the last decade that may be

impacting this is the focus on evidence-based practice in addition to the focus on nurse sensitive practice outcomes. Contemporary nurse managers must have knowledge of exemplary practice standards in order to successfully impact outcomes thus this emergence as a key competency is not surprising.

Knowledge and understanding of retention strategies were perceived as important in 2010 as compared to being rated eighteenth in 1994. One explanation of this to consider is that during the past decade there has been continued momentum of Magnet designations nationally with a major focus on nurse retention. Additionally, many studies have demonstrated the financial and outcome implications of staff retention and turnover. It may be concluded that the emphasis on staff nurse retention has caused this change in importance ratings in 2010.

Regulatory agency standards from the technical category was highly rated (8^{th}) in 2010 as an important knowledge based competency (as compared to 19^{th} in 1994). This is not surprising given the intense changes in regulatory standards imposed on healthcare organizations in today's hospital environments. Nurse managers play a key role in having an acute awareness and interpreting these standards at the unit-level. Many managers noted this as essential as noted by 67/81 respondents giving this a "4" rating.

Quality and process improvement was rated #10 in the ability to implement sector of 2010 rating as compared to being rated #20 in 1994. Unit-based quality focus must be considered in this result due to the expectation of the nurse manager to create a culture of transparency and process improvement. Of note, this is in the ability to implement section of the ratings which may be an indication that it is more than just a knowledge base needed by managers but truly a competency noted to be one of actual ability to

implement this competency. Consideration should also be given to the relationship of quality and process improvement to the regulatory agency standards rated high in the knowledge sector due the fact that agencies such as The Joint Commission exist to promote quality and safety standards from a regulatory perspective.

Next the changes in the lowest rated competency findings will be described. Four different competencies appear in the lowest rated sections in 2010 including three in the knowledge section (Interdisciplinary Collaboration, Cost Benefit Analysis and Administrative/Organizational Theories and one (Staff Education) in the ability section. Many of these lower rated competencies actually received mean ratings above "3" which is an important observation to note. In the knowledge category interdisciplinary collaboration actually had a mean rating of 3.37 with 34/81 respondents giving a "4" rating to this competency. It is somewhat surprising that knowledge of cost benefit analysis was the 8th lowest competency given the emphasis on cost containment today. This did not repeat in the ability to use category which may indicate that the importance of this is not necessarily on the understanding of this skill. Of note, cost containment and unit budget control measures are more highly rated emphasizing that nurse managers view expense control as more important than cost benefit analysis.

In the 2010 lowest ability category, staff education emerged with a mean rating of 3.2. An explanation for this may be that staff education is not viewed as a primary responsibility of nurse managers and may be viewed as a role that is carried by others thus not rated as importance. Lastly it is necessary to make note that new technology and research based care practices are not in the 2010 lowest rated competencies in either the knowledge or ability competencies. The interpretation of this may be described by the

fast paced changes in technology with many organizations in the process of implementing new electronic medical records requiring skills and competencies in this area. Research based care processes have also become more important since the original study and may be in parallel to evidence-based practice which was highly rated.

In summary, the significant findings demonstrate the overall mean ratings of importance competencies in 2010 were higher (mean=3.54) as compared to 1994 (mean=3.37). Effect size measures demonstrate a medium overall effect of 0.65 indicating a change in overall ratings with the 2010 study results yielding higher importance ratings. The conclusions that can be drawn from the study findings are that importance ratings have changed over time although new competencies have emerged in response to changes in today's healthcare environments. It is equally important to recognize that while changes have occurred some of the important competencies have remained the same.

The other findings from the study include the analysis of the impact of the study variables on the competency ratings. The variable with the most influence on competency ratings was tenure in management which impacted all categories of competencies in both the knowledge and ability categories. This is considered an "individual" variable. Of note, the "organizational" variables had minimal effect on the competency ratings. It is important to reflect on this phenomenon. The reason why this may be the case is the incredible influence that individual human and relationship-based leadership skills can have in motivating staff at the unit-level. This can be connected back to the conceptual framework of Katz, the work of AONE and the literature review. Each has noted that it is the individual knowledge and skills of a leader functioning in

overlapping technical, human and conceptual spheres that has the biggest impact on effectiveness in the role. The AONE Collaborative Framework (2005) graphically illustrates the intersection of these categories labeled communication and relationship management (human), professionalism (conceptual), knowledge of the healthcare environment (technical) and business skills and principles (financial management) with the leadership sphere represented in the middle.

Recommendations

In their new role, nurse managers suddenly have to deal with finance and budgeting, patient safety concerns, quality improvement projects, and many other challenging topics. Nurse managers are expected to achieve a blend of clinical and business management with little to no training. Based on the study findings the following recommendations are highlighted.

Provide realistic expectations of the role

Some of the most highly rated competencies included communication, decision-making and performance appraisal. Many nurse managers are ill-equipped for the fast pace, decisiveness required, and complex communication challenges they will confront. It is essential that an organization's interview processes seek out applicants with social and emotional intelligence to assure that a new nurse manager will be able to develop key verbal and written communication skills. This includes being poised under pressure and having a communication humbleness which builds relationships. Having a clear understanding of the need to develop these skills is critical when selecting managers but more importantly when a nurse chooses to become a nurse manager. Another key framework which goes hand-in-hand with excellent communication skills is decision-

making. Having an upfront understanding that as a manger key decisions will be part of the role is also essential. Lastly many nurse mangers noted that they have been surprised by the amount of interface they need to have with each staff member in regards to assuring professionalism and social enculturation. This needs to be made clear up front that it is not just about caring for patients but also about caring for each other.

Provide a skill assessment and form a plan based on competency development.

An evaluation of skill competencies of a new nurse manager is essential. The Chase Nurse Manager Competency Instrument can be used to do a self-evaluation and/or can be used at key checkpoints during development phases for those new to the role. One way that the instrument could be helpful would be as an initial assessment by having the novice manager rate their own level of knowledge and abilities. This then can be used to track progress or to focus on areas identified as opportunities.

This instrument could be deemed useful is for the development of programs tailored to organizational needs by having nurse managers in a facility rate what they believe to be important and necessary as rated by themselves for their development. Not only could an assessment be made but the instrument could simultaneously be used to evaluate current status resulting in a gap analysis strategy using comparisons of the quantitative results. Once a gap analysis is complete, focus of and development in specific areas can occur in order to close the gaps identified.

Lastly, the instrument has potential as an evaluation tool to rate the performance of nurse managers at selected intervals resulting in follow through with competency development for experienced managers. Not only does the instrument facilitate self-ratings, but it could also be used for supervisor ratings. This allows for honing in on key

competencies at a determined frequency in order to systematically raise performance. The quantitative nature of the instrument allows for measurement of progress in this scenario.

CNO involvement is critical to evaluate span of control

A critical component for nurse manager success is span of control (number of direct reports) for which the manger has oversight. It is essential for the CNO to do a formal job analysis, set realistic expectations, and conduct a span of control assessment to assure a balanced span of control. Consideration must be given to the optimal number of individual employees (not FTEs) a nurse manager can be responsible for if nurse managers are expected to have relationships with staff. It is necessary to reconsider the enormity of the nurse manager role and recalibrate if the scope becomes too large to maintain contact with the direct care staff.

Invest in Nurse Manager support for Development of Staffing, Financial Acumen and Compliance

The study findings indicate that an emphasis for nurse manager development be placed on effective staffing and retention strategies while balancing cost initiatives. Many managers are not prepared with the essential skills of developing staffing guidelines, putting out a balanced staffing schedule and monitoring overtime expenses. Managing productivity, putting together routing capital requests, and keeping multimillion dollar operation budgets on track takes support and assistance.

The other area in which managers need support is accreditation and compliance. Currently there are literally thousands of quality and compliance standards that apply to healthcare organizations and there is no way for a manager to have knowledge of them

all. Support and resources need to be available to managers so that they can operationalize them on their units.

Focus on Communication

Achieving organizational goals is all about communication – clarifying, motivating, team dynamics, sense-making, negotiation, presenting and influencing and building feedback loops. Building interpersonal relationships is foundational to the success of nurse managers. Some of the most important aspects of communication take the form of listening and showing gratitude, which is key in the role. This can take many forms including sending a card, an email acknowledgement, a handwritten note, a phone call or special recognition.

Practicing and learning key written and verbal communication strategies with the notion of using key words at key times is essential to the development of any nurse managers. Simulation and practice of these skills is a recommendation for this role regardless of level of experience.

Practice

The practice environment today is noted to be fast paced, filled with high intensity patients and complex systems involving technology and information overload. The challenges for nurse managers to direct care at the unit-level in today's environment requires specific knowledge and skills. Recommendations for practice in this regard include the provision of focused and systematic development of these nurse leaders so that they are equipped with an understanding of what skills are needed and able to seek development in the areas in which they have opportunity. The Chase Nurse Manager Competency Instrument can be used as a valid and reliable assessment tool to determine

areas of focus. It is recommended that the instrument headings be revised to reflect the five categories of the AONE (2005) framework model providing consistency in the naming of the categories with this professional organization.

Research

Further research is needed on the impact of nurse manager competencies and outcomes. To date only one dissertation (Ten Haaf, 2007) was noted to attempt to look at impact on outcomes. Ten Haaf (2007) used the Chase Nurse Manager Competency Instrument in her study although it had not been demonstrated and tested for all the psychometric properties of this study. Further research linking nurse manager competencies with nurse sensitive outcomes is necessary in today's outcome driven environment especially for Magnet organizations. Driving towards clinical and fiscal outcomes is a discussion of healthcare organizations today and further work is needed to determine which concepts and competencies have significant impact on outcomes.

Education

The findings of this study can also form the basis of leadership curriculum in BSN, Masters and DNP nursing programs. The Magnet organization has set forth in their 2008 standards that by January 1, 2013, all nurse managers must be minimally prepared at the baccalaureate level (ANCC, 2008). Many organizations are taking this to the next level and encouraging nurse managers to obtain Master's degrees. At the same time, DNP programs are gaining momentum and nurse leaders who desire a strong nurse practice focus while developing themselves as leaders are choosing this option. With the movement towards a higher expectation for formal education of nurse managers these programs are gearing up to provide state-of-the-science programs based on the

knowledge and skills needed in practice. The recommendations from this study can be considered in the development and content of these programs. These programs also need to be developed with the ability to practice these skills and include role-modeling internships and active demonstration of skill proficiency in simulated environments or an actual practice setting.

Political Processes

The results of this study may be considered in regards to the acquisition of knowledge of and skills related to the political process itself. It was noted that study participants rated political process from the conceptual category as less important to the role. There may be opportunity in this regard. AONE is active in the political arena as an advocate for the profession in many areas. While nurse managers may not be involved in governmental political processes themselves on a daily basis, they should be encouraged to know who the voice is for nurse in the political arena for their organization and understand the importance of having a linkage to that structure. Additionally, given the need to understand practice implications and scope of practice, nurse mangers need to have an understanding of the practice code of the Board of Nursing in their state.

Limitations

The primary limitation of this study is the electronic survey design which impacted the response rate and resulted in a small sample size. Challenges to sampling bias include representativeness and attrition. Representativeness is threatened by the survey design and potential for a low return rate. It is also threatened by using selected mailing lists because one can argue these groups are not a true representative sample. Attrition is a sampling threat with any survey (Dillman, 1993).

A potential to overcome the response rate barrier would have been to consider using a mailed survey as was done in 1994 instead of the online method. The survey design also is a limitation due to the lack of direct contact with the individual respondents.

This study sample of nurse managers represents only a portion of the population of nurse managers nationally is noted as a limitation. This subset may have a special and unique set of characteristics that would influence their views of nurse manager competencies. A sample limitation in this study is that only acute care nurse managers were included. While representative of the larger sector of nurse managers, this population does not include those in ambulatory, long term care or community settings.

Conclusion

The results of this study illustrate the large number of competencies that have been identified by nurse mangers themselves as competencies necessary for their important role. Although some of the competencies have changed over the past 15 years as a result of the changes in healthcare environments, the thing that remains constant is this dynamic role and the need to develop managers that hold this pivotal role. Another key result of the study is the establishment of the Chase Nurse Manager Competency Instrument as a reliable and valid tool that can be used to assess nurse manager competency and/or used as a development instrument.

The Chase Nurse Manager Competency Instrument has been revised for use by other investigators or organizations. The competency items have been updated as a result of this study. Additionally, the investigator has renamed the five categories to mimic the parallel categories that were developed by AONE in 2005 (Appendix E). This completes

the instrument development and solidifies the content is consistent with AONE and is reliable. To request permission for use of the instrument please contact Linda K. Chase at lchase@clarian.org.

Performance expectations for nurse managers practicing in acute care hospitals are complex and often unrealistic. Rising role expectations increase nurse manager stress, making coping more difficult and potentially harming nurse manager and work environment outcomes. Findings from this study have implications for developing nurse managers based on competency ratings from nurse managers themselves. Building on these competencies through practice, education and role-modeling can create a strong foundation of knowledge and skills that will ultimately impact an organization at the unit-level where the impact on staff and patients is the greatest.

It has been noted in all results of this study that "it is all about communication" in terms of the most important competency in the nurse manager role as rated by nurse managers themselves. An insightful statement was made as an open ended comment in response to the study, *"Nurse Managers have to lead with their heart as well as their head. It is critical to know when to use what and to recognize that staff members respond first and foremost to kindness". - Anonymous*

APPENDIX A. CONCEPTUAL FRAMEWORKS – LEADERSHIP

Construct	Conceptual Framework	Model
Systems	**Donabedian Theory** Donabedian (1966)	Structure – Process – Outcome Framework
	Iowa Model of Nursing Administration Gardner, Kelly, Johnson, McCloskey, Maas (1991)	Two domains of knowledge (systems and outcomes), each with 3 levels (patient, organization and healthcare system)
Leadership	**Trait Theory** Stogdill (1974)	Leader possess certain personality traits
	Behavioral Theory Herzberg (1959)	Leadership style of practice
	Contingency Theory Hersey & Blanchard (1969); Hersey, Blanchard & Johnson, 2008	Situational – assess situation and determine approach
	Contemporary ANCC - Magnet (2008)	Transactional Transformational Connective Shared Servant
Competency Based	**AONE** (1992 & 2005)	Communication, professionalism, knowledge, business skills, all intersecting with leadership competencies.
	Katz Theory Katz (1955)	Technical – Human – Conceptual Competencies

APPENDIX B. NURSE MANAGER COMPETENCY RESEARCH: 1980 – PRESENT

Author	**Date**	**Study**
Duffield	1991	A panel of five experts rank ordered nurse manager competencies drawn from the literature.
American Organization of Nurse Executives	1992	Defined the basic components of the nurse manager role divided into six categories.
Beuchlin- Teluki, Bilak, Merrick, Reich, and Stein	1993	Qualitative study defining six key roles for the nurse manager.
Chase	1994	Descriptive study that defined the competencies of the nurse manager divided into five main categories.
Shortell, Zimmerman, Rousseau, Giles, Wagner, Draper, et al.	1994	Quantitative study examining core values.
Oroviogoicoechea	1996	Consensus that human and leadership skills are taking the place of clinical competencies.
Sanders, Davidson, and Price	1996	Identified elements of a nurse manager role in rank order precedence in four components.
Georgette	1997	Descriptive study detecting nurse manager competencies in a federal hospital.
Ziegfield	1997	Identified competencies to contribute to leadership curriculum.
Cook	1999	Quantitative study determining degree of importance in NM role compared to degree of satisfaction of achievement of competence.
Kondrat	2000	Descriptive study detecting operating room nurse manager competency.
Drach-Zahavy and Dagan	2002	Qualitative study that observed nurse managers in order to document and identify key competencies necessary for the nurse manager role.
Scoble and Russell	2003	Three phased study exploring the educational skills and knowledge important for the nurse manager.
Kleinman	2003	Descriptive study exploring nurse manager roles.
Care and Udod	2003	Descriptive study detecting nurse manager competencies of nurse managers in Canada.

Author	Date	Study
Donaher	2004	Quantitative study of management competency describing activities and competencies identified are consistent with ANA scope of administrative standards.
Contino	2004	Descriptive study identifying organizational and operational competencies.
AONE Nurse Manager Competencies	2005	Redefined model and components of nurse manager competencies.
Lin, Wu, & White	2005	Exploratory study determining five competencies that were perceived as most important regardless of hospital size.
Harrison	2005	Delphi study building consensus on personal attributes and competency clusters
DeOnna	2006	Quantitative study determining NM activities including supervision, promoting staff retention, conducting unit operations, and staff development.
Hosseni	2007	Delphi study building consensus on leadership and organizational skills
Ten Haaf	2007	Quantitative study which explored nurse manager competencies with staff, patient and outcome indicators
Lewis	2009	Exploratory study examined specific behaviors associated with stress in nursing. Content analysis elicited 14 competencies with positive and negative indicators.

APPENDIX C. NURSE MANAGER COMPETENCIES, INSTRUMENTS

Author	**Year**	**Conceptual Framework**	**Tool**	**Psychometric Testing**
Goodrich *Nurse Administration study	1982 N=??	None identified	Goodrich 1982 Competency tool findings compared key competencies identified by nurse managers related to those in literature. Finding very little correlation and called for formal education for the nurse manager role.	Content validity via panel of experts
Chase	1994 N=211	Katz (1955)	Chase Nurse Manager Competency Tool	Face validity, content validity Test/retest reliability
Lewis * CNE study	1996 N=128	Iowa Model of Nursing Administration Quantitative Study CNEs in Arizona	Goodrich 1982 competency tool Findings-highest rated interpersonal relationships, decision making and supervision	Face validity, construct validity via panel of experts Test/retest correlational analysis
Cook	1999 N=59	Quantitative Study Multiple Leadership Theories Systems Approach Bernis and Nanus (1997) 18 Ontario Hospitals	Likert tool Degree of Importance in NM role compared to Degree of Satisfaction of achievement of competence Findings-top 3 scores for each category and each degree of satisfaction were identified	Instrument pretested with 5 graduate students for clarification of questions. Treating others with respect Accountability Trust in self Vision for future

Author	Year	Conceptual Framework	Tool	Psychometric Testing
Donaher	2004 N=112	Quantitative Study Management Competence	Human Capital Competencies Inventory (HCCI) 58 item instrument findings- instrument is reliable and valid Activities and competencies identified are consistent with ANA scope of administrative standards. Retaining, developing self and developing others.	Content validity via panel of experts Interrater reliability Factor analysis
Harrison	2005 N=15	Delphi Study Miller's 1990 Pyramid of competence Competency Cluster Panelists	Consensus on personal attributes and competency clusters Communication, staffing, ethics, practice standards, perspective	None
DeOnna	2006 N=527	Boyatzis's Model of effective job performance	Tool measures level of activity Findings include supervision, promote staff retention, conduct unit operations, staff development	Tested psychometric properties of Nurse Manager Competency Inventory (NMCI)
Hosseni	2007 N=11	Delphi Study Panelists	Consensus on leadership and organizational skills	Content validity via panel of nurse experts

APPENDIX D. NURSE MANAGER STUDIES USING CHASE 1994 INSTRUMENT

Author	**Year**	**Findings**	**Psychometric Testing**
Chase (original)	1994 N=211	Nurse managers	Face validity, content validity Test/retest reliability
Georgette	1997 N=37	Nurse Managers Conducted in Federal Hospital setting Highest ranked competencies were in the domains of human and leadership.	None beyond Chase study.
Kondrat	2000 N=120	Operating room nurse managers Highest ranked competencies were in the domains of human and leadership.	Cronbach's alpha testing done on the five categories of technical, human, conceptual, leadership and financial management. Results = all > 0.70.
Care & Udod	2003 N=117	Highest ranked effective communication, decision making, optimism, effective staffing strategies	None beyond Chase study
Ten Haaf	2007 N=33	Quantitative study which explored nurse manager competencies with staff, patient and outcome indicators	None beyond Chase study

APPENDIX E. CHASE NURSE MANAGER COMPETENCY INSTRUMENT

Nurse Manager Competency Instrument

Instructions: Please rate the importance of each competency statement as it applies to the first-line nurse manager role by circling the appropriate number for both sections.

Use the following rating scale.

4 = Essential for first-line nurse manager competencies
3 = Contributes significantly to first-line manager competencies
2 = Contributes moderately to first-line manager competencies
1 = Contributes minimally to first-line nurse manager competencies

AONE – Knowledge of Healthcare Environment (Chase Technical)		**Knowledge and understand of**					**Ability to implement and/or use**			
1.	Nursing Practice Standards	4	3	2	1		4	3	2	1
2.	Nursing Care Delivery Systems	4	3	2	1		4	3	2	1
3.	Nursing Care Planning	4	3	2	1		4	3	2	1
4.	Clinical Skills	4	3	2	1		4	3	2	1
5.	Patient Acuity Systems	4	3	2	1		4	3	2	1
6.	Infection Control Practices	4	3	2	1		4	3	2	1
7.	Research and Evidence-based Practice	4	3	2	1		4	3	2	1
8.	New Technology	4	3	2	1		4	3	2	1
9.	Case Management	4	3	2	1		4	3	2	1
10.	Information Systems and Computers	4	3	2	1		4	3	2	1
11.	Regulatory Agency Standards	4	3	2	1		4	3	2	1
AONE – Communication and Relationship Management (Chase Human)		**Knowledge and understand of**					**Ability to implement and/or use**			
12	Effective Communication	4	3	2	1		4	3	2	1
13.	Effective Staffing Strategies	4	3	2	1		4	3	2	1
14.	Recruitment Strategies	4	3	2	1		4	3	2	1
15.	Retention Strategies	4	3	2	1		4	3	2	1
16.	Effective Discipline	4	3	2	1		4	3	2	1
17.	Effective Counseling Strategies	4	3	2	1		4	3	2	1
18.	Constructive Performance Evaluation	4	3	2	1		4	3	2	1
19.	Staff Development Strategies	4	3	2	1		4	3	2	1
20.	Group Process	4	3	2	1		4	3	2	1
21.	Interviewing Techniques	4	3	2	1		4	3	2	1
22.	Team-building Strategies	4	3	2	1		4	3	2	1
23.	Humor	4	3	2	1		4	3	2	1
24.	Optimism	4	3	2	1		4	3	2	1
AONE – Professional (Chase Conceptual)		**Knowledge and understand of**					**Ability to implement and/or use**			
25.	Nursing Theories	4	3	2	1		4	3	2	1
26.	Administrative / Organizational Theories	4	3	2	1		4	3	2	1
27.	Strategic Planning / Goal Development	4	3	2	1		4	3	2	1
28.	Ethical Principles	4	3	2	1		4	3	2	1
29.	Teaching / Learning Theories	4	3	2	1		4	3	2	1
30.	Political Process & Advocacy	4	3	2	1		4	3	2	1
31.	Quality/Process Improvement	4	3	2	1		4	3	2	1
32.	Legal Issues	4	3	2	1		4	3	2	1

AONE – Leadership (Chase Leadership)		**Knowledge and understand of**					**Ability to implement and/or use**			
33.	Decision-making	4	3	2	1		4	3	2	1
34.	Power and Empowerment	4	3	2	1		4	3	2	1
35.	Delegation	4	3	2	1		4	3	2	1
36.	Change Process	4	3	2	1		4	3	2	1
37.	Conflict Resolution	4	3	2	1		4	3	2	1
38.	Problem-solving	4	3	2	1		4	3	2	1
39.	Stress Management	4	3	2	1		4	3	2	1
40.	Research Process	4	3	2	1		4	3	2	1
41.	Motivational Strategies	4	3	2	1		4	3	2	1
42.	Organization of Unit of Work and Workflow Process	4	3	2	1		4	3	2	1
43.	Policies and Procedures	4	3	2	1		4	3	2	1
44.	Staff Education	4	3	2	1		4	3	2	1
45.	Time Management	4	3	2	1		4	3	2	1
46.	Interdisciplinary Care Coordination	4	3	2	1		4	3	2	1
AONE – Business Skills and Principles (Chase Financial Management)		**Knowledge and understand of**					**Ability to implement and/or use**			
47.	Cost Containment and Cost Avoidance Practices	4	3	2	1		4	3	2	1
48.	Productivity Measurements	4	3	2	1		4	3	2	1
49.	Operational & Capital Budget Forecasting and Generation	4	3	2	1		4	3	2	1
50.	Cost Benefit Analysis	4	3	2	1		4	3	2	1
51.	Unit Budget Control Measures	4	3	2	1		4	3	2	1
52.	Financial Resource Procurement	4	3	2	1		4	3	2	1
53.	Financial Resource Monitoring	4	3	2	1		4	3	2	1

Demographic Data
Instructions: Please complete the demographic section by checking the appropriate answer

Which best describes your Hospital size?	**Which best describes your age?**	**How long have you been in your current management position?**
1. 1-24 beds 1. 25-49 beds 1. 50-99 beds 1. 100-199 beds 2.. 200-299 beds 2. 300-399 beds 3. 400-499 beds 3. 500 or more beds	1. Less than 25 years 2. 25-34 years 3. 35-44 years 4. 45-54 years 5. 55 years or more	1. Less than one year 2. 1-2+ years 3. 3-4+ years 4. 5-9+ years 5. 10 or more years

Which is your highest level of educational preparation?	**How long have you practiced as an RN?**	**How long have you been in your current position as a first-line manager?**
1. Associate Degree 2. Diploma 3. Baccalaureate 4. Master's 5. Doctorate	1. Less than one year 2. 1-2+ years 3. 3-4+ years 4. 5-9+ years 5. 10 or more years	1. Less than one year 2. 1-2+ years 3. 3-4+ years 4. 5-9+ years 5. 10 or more years
Do you work in a Magnet Hospital?	**What is your span of control?**	**Gender**
1. Yes 2. No	1. Less than 24 FTEs 2. 25-49 FTEs 3. 50-74 FTEs 4. 75-99 FTEs 5. 100 or more FTEs	1. Female 2. Male

Please list any other competencies that you believe are important for first-line nurse manager competency.

Do you wish to say anything else about this subject?

After completing survey, please press submit. Due date is May 30, 2010.

APPENDIX F. AONE NURSE MANAGER FELLOW LETTER

March 23, 2010

Dear AONE Nurse Manager Fellow

The first-line nurse manager role is vital to the success of any organization. As a practicing first-line nurse manager you have experience and insight into the role and the types and levels of competencies needed to carry it out.

As an American Organization of Nurse Executives (AONE) fellow, I am inviting you to assist with my doctoral dissertation research study designed to identify competencies important for effectiveness in the first-line nurse manager role. I am inviting you to participate as a one-time focus group participant to review competency statements which have been derived from the literature to create the survey instrument.

I am requesting that you review the attached listing of Nurse Manager Competencies and make suggestions in three areas based on the experience you have in your role.

1) In your expert opinion, should any statements be deleted?
2) In your expert opinion, should any statements be added?
3) In your expert opinion, should any statements be revised or re-worded?

Please include any comments or suggestions beginning on page 2 and return to me at linda.chase@osumc.edu by April 1, 2010. If you have any questions regarding this study, survey or research, please feel free to contact me at 614.366.8584 or by email.

Sincerely,

Linda K. Chase, RN, MA, NEA-BC
University of Iowa
Doctoral Candidate

APPENDIX G. AONE NURSE MANAGER FELLOWS PILOT SURVEY RESPONSES

Technical competency standards		1) In your opinion, should any statements be deleted? 2) In your opinion, should any statements be added? 3) In your opinion, should any statements be revised or re-worded?
1.	Nursing Practice Standards	• This is very big – I assume you are talking about the development of Nursing Practice Standards and how to utilize them on your unit.
2.	Nursing Care Delivery Systems	• This MUST be included! Maybe need to re-word it though.
3.	Nursing Care Planning	• Good • Possibly change this to Nursing Outcomes
4.	Clinical Skills	• Should clinical skills be required of a new manager? The goal is to get them to be administrative experts and not clinical experts. While it does give credibility to the manager who can take a patient load, it should not be their focus. I would think this could be deleted. • I have never found this to be a competency to be relevant, although I also feel that it is one of my downfalls. I know many managers who cannot provide beside care but are superb managers and leaders. My issue is that I could never manage an area that I could not work.
5.	Patient Classification Systems	• Good • Acuity systems is a more contemporary term
6.	Infection Control Practices	• Good • Performance improvement / quality initiatives
7.	Research based care practice	• Good • Better wording might be Evidence Based Practice • Evidence Based Practice
8.	New Technology	• Good • Would possibly revise or re-word, perhaps replace ‘new’ with ‘innovative’ or ‘current’?
9.	Case Management	• Good
10.	Information Systems and Computers	• Good
11.	Regulatory Agency Standards	• Good • Maybe add Disaster Management
Human competency standards		1) In your opinion, should any statements be deleted? 2) In your opinion, should any statements be added? 3) In your opinion, should any statements be revised or re-worded?
		• This entire section is critical and all of them are important- wouldn’t change it
12	Effective Communication	• Consider a competency for “Crucial Conversations”
13.	Effective Staffing Strategies	• Good
14.	Recruitment Strategies	• Good • I would add something about work/life balance
15.	Retention Strategies	• Good
16.	Effective Discipline	• Good
17.	Effective Counseling Strategies	• Good

Human competency standards		1) In your opinion, should any statements be deleted? 2) In your opinion, should any statements be added? 3) In your opinion, should any statements be revised or re-worded?
18.	Constructive Performance Evaluation	• Good • I would include something on performance management, aside from annual reviews and discipline. IE: Performance Improvement Planning for low performing staff.
19.	Staff Development Strategies	• Good – This one might not be as important for a first year manager, but will get more and more important as they are able to focus more on their staff development and less on 'making it through the day'. • Shared governance; how to develop a partnership with staff to build engagement
20.	Group Process	• This statement could be re-worded. To a new manager it might seem ambiguous.
21.	Interviewing Techniques	• This is HUGE!
22.	Team-building Strategies	• Good
23.	Humor	• Not sure that you need this one as a competency – although it is important to have in general
24.	Optimism	• Again, not sure that you need this one as a competency. It is important, but probably could be deleted from this particular survey. • I would suggest adding Personal Constraints. In my experience, we spend a large majority of our training in identifying constraints in our staff and learning to coach them to improved performances. However, we could use more insight on our own constraints either through 360 evaluations from specific people (not us choosing those we know will give us a favorable eval) and /or other training.
Conceptual competency standards		1) In your opinion, should any statements be deleted? 2) In your opinion, should any statements be added? 3) In your opinion, should any statements be revised or re-worded?
25.	Nursing Theories	• Not so sure the theories will help someone in this role
26.	Administrative / Organizational Theories	• Revised – understanding and application of administrative/organizational theory • Very important. Training must occur in this. Each manager has to know the organization's stance, mission, vision, and ensure that their department's goals are cohesive with that.
27.	Strategic Planning / Goal Development	• Again, this is a big one. Too often our jobs bog us down in the day to day drama. It is very important for a manager to be able to look to the future, see the big picture, and be able to think of 'what's next'.
28.	Ethical Principles	• I would hope that most of the managers hired would be ethical. They at a minimum need to know where their hospital resources are for ethics related issues.
29.	Teaching / Learning Techniques	• Revised – understanding and application of Teaching / learning theory • This is important. Managers need to know how to figure this out in each employee so that they can develop their staff.

Conceptual competency standards		1) In your opinion, should any statements be deleted? 2) In your opinion, should any statements be added? 3) In your opinion, should any statements be revised or re-worded?
30.	Political Process	• This can be learned as the manager develops • Revised – political process and advocacy • Not sure that this has to be a competency of every front line manager. But it is important for managers to know where their resources are. They need to know how to follow the government locally so that they can see what applies to their practice, and need to know how to affect change if something does impact them.
31.	Total Quality Management Processes	• I think TQM has changed to just Process Improvement • Revised – quality improvement methodologies • Moderately important. Important to know what it is and what it means. Not all organizations will use this exact process so might not be as relevant in some places.
32.	Legal Issues	• Medical and human resources • This is much more important than I originally thought. Each unit has specific legal challenges, and anticipating them and educating new managers on them could save them tons of work and effort later on.
Leadership competency standards		1) In your opinion, should any statements be deleted? 2) In your opinion, should any statements be added? 3) In your opinion, should any statements be revised or re-worded?
33.	Decision-making	• Good
34.	Power and Empowerment	• This is the big one. I think developing and empowering staff is essential. The servant leader! • Good
35.	Delegation	• Good
36.	Change Process	• Good
37.	Conflict Resolution	• Also negotiation skills • Good
38.	Problem-solving	• Good
39.	Stress Management	• I would include work/life balance in stress management • Good
40.	Research Processes	• Good
41.	Motivational Strategies	• Good
42.	Organization of Unit of Work	• Maybe move this to another section (like conceptual) since this is narrow focused instead of global leadership focus – or remove “Unit”. Possibly and Organizational Development • I’m not sure what you mean by this one – perhaps clarify • Good
43.	Policies and Procedures	• Good
44.	Staff Education	• Good
45.	Time Management	• Prioritization • Good

Financial Management Competency standards		1) In your opinion, should any statements be deleted? 2) In your opinion, should any statements be added? 3) In your opinion, should any statements be revised or re-worded?
46.	Interdisciplinary Care Coordination	• Good
47.	Cost Containment and Cost Avoidance Practices	
48.	Productivity Measurements	
49.	Unit Budget Forecasting / Generation	• Revised – operational and capital budget forecasting / generation
50.	Cost Benefit Analysis	
51.	Unit Budget Control Measures	
52.	Finance Resource Procurement	
53.	Financial Resource Monitoring	

APPENDIX H. UNIVERSITY OF IOWA IRB APPROVAL

Human Subjects Office
340 Medicine Administration Building
Iowa City, Iowa 52242-1101
319-335-6564 *Fax* 319-335-7310
irb@uiowa.edu
http://research.uiowa.edu/hso

IRB ID #: 201002773

To: Linda Chase

From: IRB-02 Univ of Iowa, DHHS Registration # IRB00000100, DHHS Federalwide Assurance # FWA00003007

Re: Nurse Manager Competencies

Approval Date: 04/16/10

Next IRB Approval Due Before: 04/16/11

Type of Application:
☒ New Project
☐ Continuing Review
☐ Modification

Type of Application Review:
☐ Full Board: Meeting Date:
☐ Exempt

Approved for Populations:
☐ Children
☐ Prisoners
☒ Expedited ☐
Pregnant Women, Fetuses, Neonates

Source of Support:

This approval has been electronically signed by IRB Chair:
Janet Karen Williams, PHD
04/16/10 1844

APPENDIX I. CONSENT LETTER

FOR IRB USE ONLY
$STAMP_IRB
$STAMP_IRB_ID
$STAMP_APPRV_DT
$STAMP_EXP_DT

We are writing to invite you to participate in a doctoral dissertation research study. The purpose of the study is designed to identify nurse manager competencies important for effectiveness in the first-line nurse manager role.

We are inviting you to be in this study because as a first-line nurse manager, your role is vital to the success of any organization. As a practicing first-line nurse manager you have experience and insight into the role and the types and levels of competencies needed to carry it out. We obtained your name and address from the American Organization of Nurse Executives nurse manager membership. Approximately 600 people will take part in this study at the University of Iowa.

If you agree to participate, we would like you to complete the confidential electronic survey, which should take you approximately 30 minutes to complete. Deadline for completion is May 30, 2010.

The goal of the survey is to describe self rated nurse manager skills and competencies and investigate the relationship between gender, hospital size, Magnet status, nurse education preparation, scope of role oversight and management experience.
We will keep the information you provide confidential, however federal regulatory agencies and the University of Iowa Institutional Review Board (a committee that reviews and approves research studies) may inspect and copy records pertaining to this research. If we write a report about this study we will do so in such a way that you cannot be identified.

There are no known risks from being in this study, and you will not benefit personally. However we hope that others may benefit in the future from what we learn as a result of this study.

You will not have any costs for being in this research study. You will not be paid for being in this research study.

Taking part in this research study is completely voluntary. If you decide not to be in this study, or if you stop participating at any time, you won't be penalized or lose any benefits for which you otherwise qualify.

If you have any questions about the research study itself, please contact **Linda Chase, linda-chase@uiowa.edu or 614.307.4537**. If you have questions about the rights of research subjects, please contact the Human Subjects Office, 300 College of Medicine Administration Building, The University of Iowa, Iowa City, IA 52242, (319) 335-6564, or e-mail irb@uiowa.edu. To offer input about your experiences as a research subject or to speak to someone other than the research staff, call the Human Subjects Office at the number above.

Thank you very much for your consideration. The completion of the survey indicates your consent to participate.

https://survey.uiowa.edu/wsb.dll/1192/nursemanagercompetencysurvey.htm

Sincerely,

Linda Chase

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