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Skills for nurse leaders of the future: A comparative study of nurse executives with and without masters degrees in business

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Skills for Nurse Leaders of the Future;
A comparative study of Nurse Executives with and without Masters Degrees in Business

by

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by
Kathleen D. Sanford

We hereby certify that this Dissertation submitted by Kathleen D. Sanford conforms to acceptable standards, and as such is fully adequate in scope and quality. It is therefore approved as the fulfillment of the Dissertation requirement for the degree of Doctor of Business Administration.

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Signed Kathleen Blanford

ABSTRACT

Skills for Nurse Leaders of the Future;
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A continuing problem for those who educate Nurse Executives, as well as hospitals who employ them is: "What is the appropriate educational preparation for these positions?" Some schools of Nursing and Nursing leaders agree that executives in charge of a clinical profession should have advanced clinical education. Research on what hospital Chief Executive Officers and Nurse Executives feel is appropriate educational preparation demonstrates a preference for business education. The hospital industry is changing at a rapid rate. Today's chief nurse executive is in the uppermost level of the hospital power structure. The current trend of replacing chief operating officers with nurse vice presidents for clinical services underscores the importance of advanced strategic skill levels. A variety of opinions exist regarding skills health care executives of the future will need. Skills should be taught in preparatory educational programs.

This research project used a three part approach: a) an exploratory survey to determine necessary nurse executive skills, b) a survey of nurse executives' self perceptions of their skills, and c) an explanatory comparison of nurse executives' perceptions with experts', other executives', and middle managers' ratings of important management skills. Part "a" surveyed 50 Fellows in the American Academy of Nursing. Part "b" surveyed 100 members of the American Organization of Nurse Executives. Part "c" utilized data obtained from "a", "b", and previous Data analyses were performed using Statistical Package for the Social Sciences (SPSS). Two research hypotheses were evaluated by five two-tailed independent samples t-tests with 0.05 levels of significance. When the samples of nurse executives with MBAs and those without MBAs are compared to each other, multi-industry CEOs, and middle managers, there are significant differences. Nurse executives with MBAs have self-perceived skills which more closely resemble what experts determine to be needed for nurse executive jobs. They also have skills which more closely resemble what CEOs feel is needed for executive jobs, and what middle managers feel is required for middle management positions.

This research includes an expert prediction of necessary administrative skills. It contributes information on whether business education is needed to obtain these skills and provides evidence for the debate regarding the efficacy of business preparation or advanced professional preparation for the executive managing professionals.

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CHAPTER 1

INTRODUCTION

The role of the nurse executive is evolving in conjunction with a number of trends in health care. These include: hospitals operating as businesses, increasing technology, and emphasis on quality management. This dissertation consists of research in the area of Nursing Administration. The specific questions addressed were:

1. What are the most important skills needed by nurse executives for the next ten years?
2. Which nurse executives feel more confident that they have these skills--nurse executives with Masters of Business Administration degrees (MBAs) or those without MBAs?
3. Do nurse executives feel they have management skills more similar to those of an executive or those of a middle manager?
4. Do nurse executives with MBAs feel their management skills are significantly more similar to those of other executives than do nurse executives without MBAs.

Context of the Problem

There are several background issues of importance to these questions. They include:

1. The general issue of the appropriate background for managers of technical/professional workers.
2. The debate over the value of an MBA degree.
3. The evolution of hospitals into business organizations.
4. The job description and preparation of Nurse Executives.

Appropriate Preparation for Managers of Professional Workers

The appropriate educational preparation and background of managers has been the subject of long standing debate. At issue has been the efficacy of "professional" managers who are generalists versus discipline specialists who are promoted into management positions. Management theory has been divided in this area. One group of theorists believe that a good manager can manage anything and does not need to have first hand experience as a technician or professional in the type of department or company managed. The other group states that the best managers have a background which includes expertise in the area managed. The following discussion illustrates these positions.

The Efficacy of Generalist Executives

Paul Hersey and Kenneth Blanchard (1972) stated that the three skill areas necessary for managing are technical, human, and conceptual. Technical skills are those abilities needed to perform specific tasks. Human skills refer to ability and judgement in working with people. Conceptual skills are defined as understanding a complex organization and an individual's place in it. Supervisors at lower levels need "considerable" technical skill because first-line managers frequently need to train and develop technicians. As levels of managers progress to higher levels, less technical knowledge is needed; therefore, executives do not need these skills, but they should know how various technical functions interrelate.

According to Peter Drucker (1974), a manager should know his craft, but technical knowledge is not enough to give him management legitimacy. The process of management is a generic function since managers face the same problems in all organizations. In other words, an executive has skills which could be of value in a variety of industries and should not be confined to their own professional disciplines. Drucker (1988) speaks to those who will be the business managers of tomorrow. He suggests that many technicians never want to be anything but technicians. Furthermore, top management might become a separate career, with top managers lacking the technical background of subordinates, which would add to the efficiency of the business.

Several writers have said that the dual role of the professional/technician and manager has caused problems in executive suite decision making. William Morrow (1975) claims that members of a profession usually seek to preserve corporate independence of their group. According to Anthony and Herzlinger (1980), in most non-profit and service organizations the influential people are professionals, whose motivations are inconsistent with good resource allocation and utilization. Inadequate weight is assigned to financial implications of decisions by managers who come from professional/technical backgrounds. These managers find themselves motivated by dual, often conflicting standards; those of their organization and those of their professional

colleagues. The result is reduced organizational effectiveness. Harold Larkin (1988) reported recent research results supporting this position among one group of medical professionals. Physicians placed in hospital management have been shown to raise hospital costs because they operate with traditional professional attitudes which have little regard for cost containment or careful use of resources. AT&T completed longitudinal studies of managers in the mid 1980s, finding that managerial success is closely related to level of education. Social science and humanities majors show better management skills than engineering, math or science majors. (Howard, 1986). According to Rosabeth Kanter (1989), every manager must be able to think cross-functionally. This means that a manager must have understanding of other organization departments so that decisions are based on the good of the whole organization, not to the advantage of a particular department or profession. This may be difficult for professionals promoted into management.

According to Barsouix and Lawrence (1991), at least one country has largely embraced the generalist manager idea. In France, management has become a separate profession, with its own entry requirements and regulations. Although some managers may begin as scientific or engineering specialists, most are generalists who get to the top out of prestigious management schools. The argument may be becoming less important as companies replace vertical hierarchies with

horizontal networks (Hirschborn, Gilmore, 1992). Management of the future will be performed by interfunctional teams. Therefore, no specialist will have all of the skills of subordinates or members of the team. The opinions of theorists who argue that technical or professional backgrounds are important for management success follow in the next section.

The Case for Executives with Specialist Origins

William Glueck's description of the ideal manager (1979) included "expertise power". In other words, if a manager does not have expertise in the area managed, he must depend upon others for that expertise. The individuals depended upon will then have power over the manager and the work group.

In 1954, Robert Katz stated that technical skills are important at lower administrative levels but not at top levels, as long as top managers have skilled technical subordinates. Twenty years later he revised this opinion, suggesting some technical skill is needed for even chief executives in all but the largest companies. There is a need for executives to have personal experience enabling them to ask the right questions of subordinates and to be able to evaluate answers. As Glueck mentioned, this gives the manager expertise power.

Evan and Zelditch's research (1961) revealed that groups resist and are covertly disobedient when their managers do

not have expert knowledge of the group's work tasks. J. A. Raulin (1989) found there is a need for professionals entering management positions to understand that allegiance to their profession cannot take precedence over corporate loyalty because corporate efficiency and business success could be negatively impacted. Managers should be selected from the professional ranks because they understand technology but they must have administrative training. Professionals are more difficult to manage than their non-professional counterparts because professionals and managers come from different cultures. The executive trained in both roles can understand both cultures. The cultures differ because professional, organizational, personal, and societal values may not be the same. The health care professional may have personal values which dictate that all people should get the highest possible quality care regardless of cost, government policy, or society's desire not to pay for high quality for everyone. Her profession may preach the elevation of the particular profession over other groups of workers at the expense of teamwork in the organization. The organization may value cost containment, teamwork, compliance with government regulations and organizational survival over the highest possible quality. The executive trained as both a professional and organization manager can understand all three types of values.

D. S. Fogel (1989) concurs that professionally dominated organizations, such as hospitals, are unique. Their special

characteristics require executives who understand professionals. The best managers may be professionals who have learned management. This may be true because generic managers and healthcare professionals don't speak the same language, which causes controversy over allocation of resources. (de Pouvourville, 1989).

McCall and Clair (1990) feel that physicians who make the transition from practitioner to manager often fail because of what they call "arrogance." Even so, they believe the clinical background is needed for hospital leadership.

The debate about necessary backgrounds for executives continues. Those who espouse the generalist theory argue that management and leadership skills are universal and can be practiced in any industry. The group preferring professional or technical backgrounds for executives cite communication problems, culture differences, and workforce resistance when executives have not experienced the work of those managed.

Sometimes specialists circumvent the specialist versus generalist issue by obtaining generalist management degrees to complement their specialist education. The most common generalist graduate management degree is the MBA; MBAs are degrees for executives who have personal career goals in general management. (Dolan, 1990).

In a Harvard Business Review interview (1991, Nov-Dec), Frederick C. Crawford stated his feelings that managers need a background including the same work as those managed. With

such a background, a manager learns about the workforce and gains its respect. He believes that no MBA should be awarded to a person who has not worked at least one year on the front line. There are varying perceptions about MBA education for managers. These are discussed in the next section.

Perceived Value of the MBA

According to Feinstein (1990), the general population sees the MBA as a ticket to a better job. In 1990, applications to Dartmouth's Tuck School of Business were up 52 percent. Duke's Fuqua School's applications were up 74 percent, MIT's were up 10 percent, and Southern Methodist's were up eight percent in spite of the fact that other graduate school applications had decreased.

Business students learn behavioral science, applied math, applied economics, production, marketing, finance and accounting. (Bass, 1990). According to Working Smart Journal (March 15, 1990), "executive MBA programs" have been established by universities to attract current managers to graduate school. Executive MBA programs cover business programs from a managerial perspective. In other words, business classes are taught at times convenient to current managers and are marketed as degrees with heavy emphasis on management skills rather than "technical" business skills like marketing and finance. Current managers may choose an executive program because it is designed for busy executives.

In spite of MBA program popularity, some authorities feel that a business degree is being sought by too many people. Waldrop (1989) feels businesses are interested in managers with liberal arts degrees because there is a perceived over-supply of people with MBAs and they are considered too industry specific. This reflects an understanding that "people skills" such as communication and interpersonal relations are important. These skills are not emphasized in traditional MBA programs.

Other authorities express confidence that the MBA degree is still important in a variety of businesses, providing valuable education for executives in all fields. MBA education must stress leadership skills, systems perspectives and the relationship of the organization to the marketplace. (Roth, 1989). Consulting firms have expressed an increased demand for people with MBAs. (Brandenberg, 1989). Business schools recognize the need for well-rounded managers with personnel skills. According to Birchall (1988), new curricula include human resource management courses along with finance and legal classes. Hunt and Speck (1986) examined business school classes and found that broad or general MBAs are being displaced by theory based professional specialization. Although they are all entitled "MBA", graduate business school degrees may be specialized in such areas as finance, marketing, tax law, personnel, or health care. Specialists can get business degrees tailored to their specialty.

Healthcare's Problem With Management Theory

The history of hospitals shows that they have evolved to their current business status. Once considered institutions of charity, they have recently been thought of as places of business. According to a national Arthur D. Little opinion survey, 67 percent of Americans think that hospitals are businesses. Only 26 percent think that they are social service organizations (Seaver, 1990). This change in the nation's thinking about their healthcare organizations is reflected within the institutions themselves, where most top corporate officers are now trained in hospital administration or business rather than medicine. Executives with clinical backgrounds, including chief nurse executives (CNEs), are seeking management and business education in increasing numbers, so that their management education is more similar to the chief executive officers' training.

Seay and Vladeck (1988) outlined the history of hospitals in the United States. They pointed out that hospital missions have changed over time. Figure 1 illustrates these changes.

Hospitals now have dual roles as businesses and charity organizations. They have become aggressive, competitive and profit oriented, making many decisions primarily based on the bottom line. The healthcare leaders of today are chosen for exceptional business skills and thorough knowledge of healthcare. (Levey, 1990). In the future, training in business administration will become even more important,

because of the perception that business knowledge is needed in an environment of increased competition for healthcare dollars and market. (McManis, 1990). Even nurses have realized that it is essential to consider healthcare a business. Schools of nursing and hospitals are giving classes on hospital finance and the business world to nurses. (Pelleteir, 1990).

Figure 1.

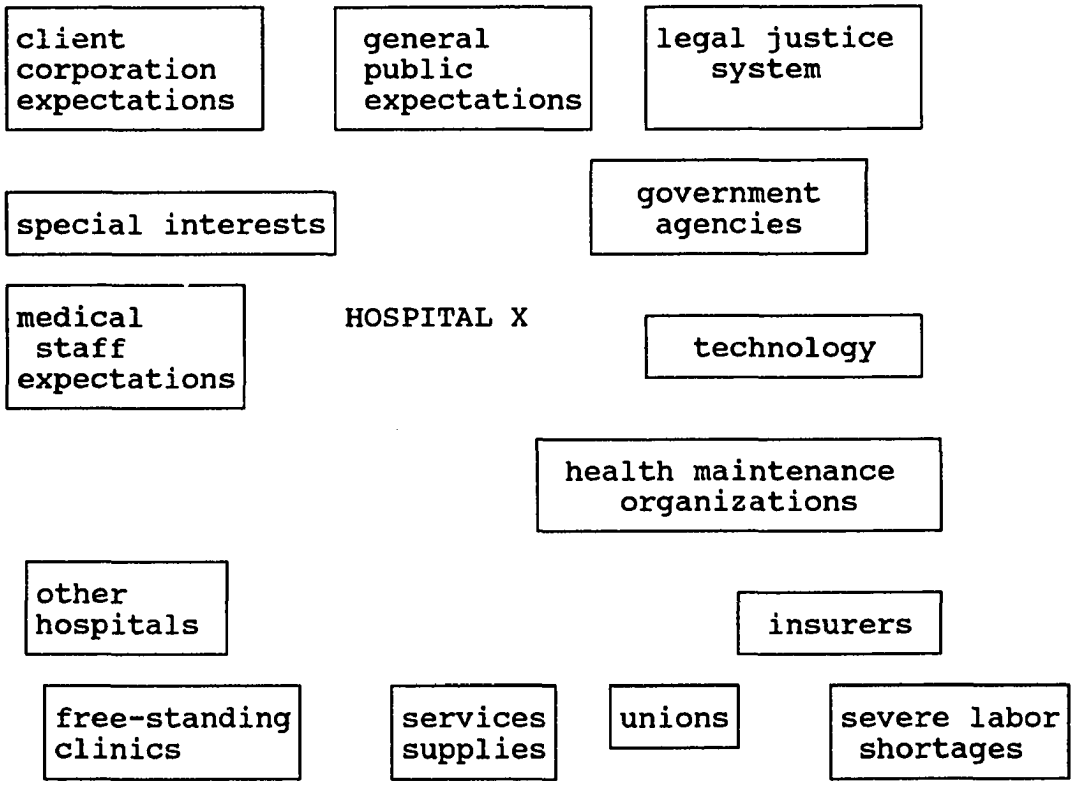
Time Line of U. S. Hospital History

Year	
Pre Civil War	A few, large philanthropic institutions for poor
1870	178 U.S. hospitals; ethnic or religious ties
1890	6500 hospitals; could no longer be supported by charity
1910	hospitals needed non-charity income; administrators were men with medical backgrounds
1930	first MBA for health care administrators (University of Chicago)
1950	hospital community service and business missions developed; professional staffs hired
1970	charges set to cover costs; some hospitals combined into for-profit chains
1990	hospitals considered businesses; competitive environment

The modern hospital is influenced by forces beyond the control of the healthcare system, such as demographic trends, social values, public policies, consumer expectations and attitudes. Many forces are in conflict with each other, bringing pressures on the hospital which makes managing more difficult than in the past. Ethical, quality, and political considerations must be balanced against cost constraints. The complexity of the hospital environment is illustrated below.

Figure 2

Pressures on the Modern Hospital



Preparation for Nurse Executives

The appropriate educational preparation for the managers and executives of technical professionals is currently of great interest to healthcare institutions. Over the past five years, unfavorable legislation has resulted in increasing costs for new technology combined with decreasing revenues, a continued expectation from the public that all people should receive the best possible health care, and an era of competition. Hospitals are examining closely who should be placed in charge of their "products," a new term for the medical world.

In the past, hospital products were measured in days of hospital care, number of laboratory tests, or number of surgical procedures (Salter, 1986). Today, these products are defined as a portfolio of clinical services to various distinct patient markets. A typical list of clinical product lines includes oncology, cardiology, neurology, obstetrics, pediatrics, rehabilitation, urology, orthopedics, general surgery, respiratory, renal, and opthamology. Within the portfolio of services might be hospital inpatient care or outpatient care such as emergency, outpatient surgery, specialty clinic, or home health services (Manning, 1987). Specific services are offered as part of each product line. The majority of services are partially or totally provided and managed by nurses. For example, normal vaginal deliveries, caesarean sections, and community prenatal classes are all products in the hospital obstetrics product line. Typically, nurses teach the prenatal classes. They

deliver prenatal in-hospital care, manage routine deliveries by administering medications, coaching, monitoring the progress of labor, and keeping the physicians informed (frequently by telephone) of that progress. They set up the surgical equipment for caesarean sections and assist physicians in the procedures. They provide the post-delivery hospital care. They order and account for equipment and supplies. The set of services called "patient care" is usually considered as synonymous with "nursing care." As a service industry with patient care the primary ingredient in all of its products, hospitals have recognized they are largely controlled by the Division of Nursing.

Executives in charge of nursing departments have responsibility for up to 30 percent of multi-million dollar hospital budgets and up to half of all hospital employees. Nursing divisions are seen as the major cost centers of hospitals so that a hospital's profit or funded depreciation depends largely on the Nursing department's ability to keep costs down. With this control over resources, the person placed in charge of the Nursing division has a major impact on the success of the institution.

Since nurse executives are responsible for 14-30 percent of the total hospital assets they must understand financial forecasting, planning, decision making, and possess a systems view of the hospital. (Franks-Joiner, 1990). Public relations, marketing and strategic planning are the important skills for a nurse executive because she or he must now have a new awareness of the hospital's "bottom line." (Auttonberry, 1988).

Historically, executives in charge of the nursing division have been registered nurses promoted from bedside patient care through the ranks of nursing management. Research shows that these nursing administrators frequently lack education in management and learn necessary skills on the job. (Price, Simms, Pfoutz, 1987).

Both researchers and nurse executives have commented that in the past Chief Nurse Executives (CNEs) have not had the preparation needed for the top management position. Promotion into all levels of management for nurses was more a result of individual clinical knowledge than management ability. (Holland, 1981). The result has been that successful clinicians have been moved into management positions where they become incompetent (Poteet, 1987). Nurses have been promoted and found themselves unprepared for management. (Rowland, 1984).

In spite of the problems identified above, the prevailing thought among nurses seems to be that nurses should manage nurses. Just as Mark Doyne (1987), a medical doctor, writes that physicians can manage other physicians better than non-physicians because they understand physicians and how they think, nurses have argued that it's important for their supervisors to be nurses.

To address the problem of unprepared clinicians being promoted into executive positions, Schools of Nursing have developed Graduate Programs in Nursing Administration. The first formal administrative education for nurses occurred at Teachers College, Columbia University, New York City in 1899.

In the 1920s, Masters degrees in Nursing Administration were first offered. Thirteen universities offered these graduate degrees in the 1950s. By the 1970s, disenchantment with Nursing Administration by the nursing profession made higher education in management less popular with nurses slated for top executive positions, and enrollment decreased. Today there is an increasing awareness of the need for graduate education for nurse executives. As leaders of their agencies, they are expected to have business skills equal to other executives. (Mark, Turner, Englebardt, 1990).

Because of a lack of management and business training in the past, nurse executives have been categorized in varying levels of management. While some are considered to be part of the top administrative team, others have been considered middle managers, equivalent to department heads such as the Director of Social Work or Physical Therapy. Some nurse executives have been replaced by non-nurse executives at the top levels of administration. In a few cases, hospitals have given the title Vice President for Nursing or Patient Care Services to non-nurse generalists. Either one Director of Nurses or several nursing division directors then report to this non-nurse executive. (Giddens, Homan, Touns-Culton, 1988).

In 1984 there were 160,000 registered nurses in hospital administrative positions. (Rowland, 1984). Forty seven per cent of these were Vice Presidents, nine percent were associate administrators, and 15 percent were assistant administrators. (Staff, Witt Associates, 1987). The titles

suggest the majority of executives in charge of hospital nursing divisions have been considered to be a part of the business top management team.

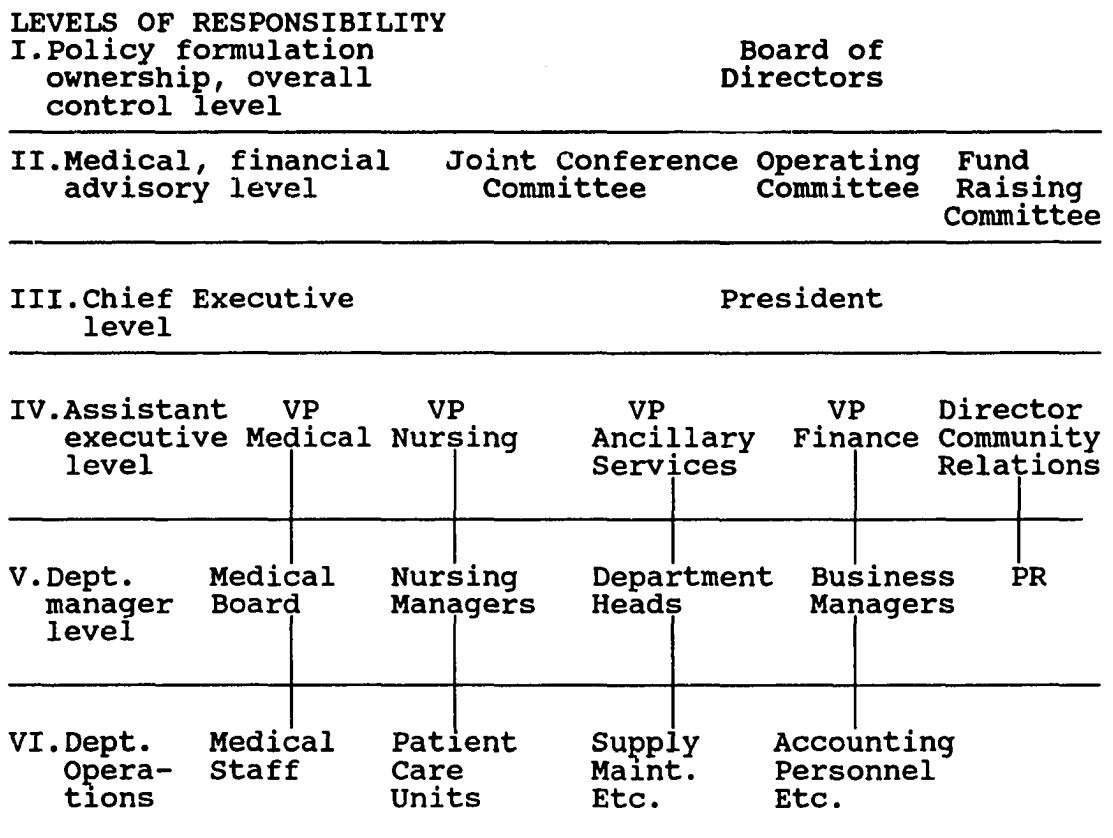
Although each healthcare organization has its own organizational chart, Figure 3 indicates a typical hospital relationship between nurse executives and other hospital managers. (Alexander, Gordon, Jensen, Meeks, Perrodin, Purdy, 1962).

Nursing literature of the 1980s was concerned with the emergence of the hospital as a business entity and how that effected the CNE position. The role of today's CNE is part of the uppermost level of the power structure; an inhabitant of the corporate office responsible for strategic management. The survival of today's hospitals depend on nurse executives with strategic skills. (Poulin, 1984).

Current writing indicates a conviction of nurse executives, educators and researchers that financial management knowledge is essential. According to Thorpe (1987), there is concern nurse executives are becoming so business and administration oriented that they are rejecting professional nursing leadership roles. While chief executive officers desire nurse executives with greater business acumen, nurse leaders in academia worry that professional ethics are being downplayed by business oriented nursing leaders. They do not consider business ethics to be equal to professional nursing ethics. In other words, they fear that professional cost and profit considerations have usurped quality patient care goals.

Figure 3.

A Hospital Administrative Organizational Chart



Administrative Functions of Level IV.

VP Medical: Supervision and control of medical and surgical practice of medical staff members.

VP Nursing: Supervision, planning, and control of patient care functions.

VP Ancillary: Assisting President with supervision, planning, and control of administrative services.

VP Finance: Supervision, planning, and control of fiscal operations.

Director, Community Relations: Supervision, planning and control of public relations and programs designed to interpret the hospital to the community.

Hospitals are being forced to become more business-like in their operations. Consequently, nursing leaders need to learn business skills. The evolution of nursing leaders into business managers has focused on financial management because the CNE must operate a cost effective division. He or she must be prepared educationally to do financial planning, develop policies and procedures, make economic forecasts, manage programs, do strategic planning and articulate nursing's contributions to the financial success of the organization. (Staff, American Hospital Association, 1985).

Since nurse executives are heavily involved in financial planning, market analysis and new program development (Moore, Biordi, Holm, McEllmurray, 1988), it is not surprising that the literature repeatedly refers to these as skill areas needed by CNEs. In the recent past, many nurse administrators lacked the ability to substantiate fiscal requests because the skills of a good practitioner are not the skills needed by a good manager. (Rotkovitch, 1981). The nurse manager's new and important activity is responding to new financial pressures in health care. (Blaney, Hobson, 1988). Financial management has not been part of the education of a practicing nurse professional. (Sanford, 1983). The new skills that all CNEs must acquire are cost accounting, computer literacy, and marketing. (Kirk, 1987). Some nurse educators have determined the appropriate skills to be taught to prospective nurse administrators are accounting, budget planning, administration and management techniques. (Daria, Moran, 1985).

If these skills are needed, it is not surprising that many nurse executives are seeking and earning Masters Degrees in Business Administration. The American Hospital Association (1988) reported that 30.7 percent of hospitals required a Master's degree for the CNE. Since 1984, the masters of choice has been the MBA because CEOs want CNEs with executive level business skills. (Staff, Hospitals, October 5, 1989). Chief Executive Officers (CEOs) state they prefer the MBA over the MHA because the MBA emphasizes greater quantification skills. (Fralic, 1989).

CEOs who were asked their opinion of the best education for nurses in administration selected the Bachelor's degree in Nursing combined with an MBA. (Giddings, Homan, Towns-Culton, 1988). Chief executives have also suggested that nurses gain credibility when they use the same business approaches as their boss. (Ballein, 1987).

Other healthcare professionals are combining MBAs with clinical backgrounds. A survey of employers of dieticians hired in business and industry showed that employees ranked an MBA as the second most important qualification for dieticians. (Kirk, Shanklin, 1989). Nursing administrators with MBAs have increased in numbers because of healthcare economics, an enthusiasm for business management under a Republican president, and because hospital administrators with MBAs are willing to pay for nurses to earn MBAs. (Henry, 1989). Many hospitals now require business degrees

and experience for nurse executives. (Wintz, 1987). Because of growing numbers of nurse executives with MBAs, there has been an increase in their compensation. Nurse executives now control other departments such as dietary, security, transportation, social services and infection control. They frequently have the title "Vice President for Patient Care." (Nemes, 1990).

Some nurse executives seek MBAs that specialize in Nursing Administration. According to Blair (1989), the most effective CNE is seen as an executive who synthesizes the best elements of nursing and management, shares responsibility for the whole organization, and is not viewed as being interested solely in nursing. Whether this synthesized education should take place in schools of nursing or business is a current question.

The dual degree, the MSN/MBA offered in nursing schools, is seen as the latest development in the evolution of nurse executive education. (Ryan, Conway, Welch, 1990). Graduate faculties argue over such blended credentials. Some wish to encourage dual degrees, as long as they occur in Schools of Nursing where executives will be encouraged to retain their "loyalty to Nursing." (Forni, 1988). They believe business education is essential, but such education should take place in schools of nursing with an articulation with business schools. (Fralic, 1987). The objective of the schools of nursing is to synthesize nursing with business. (Schultz,

1989). Whether they believe this education should occur in the Nursing or Business school, nurse educators are advocating graduate curricula including both.

Whichever school provides them, business skills are essential to the CNE. Managerial skills of nurse executives must be second to none because of the hospital's complex environment, intense demands, and competition for resources. (Fralic, 1989). It is essential that the nurse executive bridge the gap between professional and managerial cultures while understanding both points of view. (Nettles-Carlson, McLaughlin, 1985). Because nursing is a business and nursing managers are involved in both clinical care and business, the dual degree is becoming more common. (Kerfoot,1990). With support from the nursing administration community, the University of Colorado has opened a dual degree program that consists of 30 nursing semester credits, 30 business semester credits and six elective credits. (Boerstler, Suver, 1989). Ten universities have received grants from the Commonwealth Fund, a philanthropic organization, to develop joint masters in business and nursing. (Staff, Nurse Executive, Nov., 1989).

The Commonwealth Fund has a program to help outstanding nurses receive business training in finance, statistics, and management because the organization believes nurse leaders need quantitative and analytical skills. In 1990, they awarded fellowships to nurses pursuing either an MBA or

MSN/MBA. (Executive Nurse Fellowship Program, 1990). The Wall Street Journal (October 31, 1989) reported that the Commonwealth Fund's research revealed CNEs can be responsible for more than 1000 employees and at least one-third of the hospital budget. Furthermore, a survey conducted by Modern Healthcare magazine (September 22, 1989) found that nurse executives with MBAs are better paid and more satisfied with their careers than nurses without formal business training.

Total Quality Management for Hospitals

As businesses involved in a high technology-high touch service industry, hospitals have been expected to provide quality in their service. Each state has licensure requirements for the professionals employed by hospitals and for the hospitals themselves. They are inspected yearly by a state agency to ensure they meet state licensing requirements. In addition, hospitals must be accredited in order to receive government payment from any government health care insurance plan such as Medicare or Medicaid. This accreditation may be done by a state agency performing a Medicare accreditation survey, but is usually obtained through the Joint Commission for the Accreditation of Health Care Organizations (JCAHO). JCAHO is a private not-for-profit quality accrediting agency which is paid by individual hospitals to set hospital quality standards and then evaluate hospitals on those standards. Standards from the Joint

Commission Accreditation Manual for Hospitals (1991) for nursing care are listed in table 1. Hospital accreditation by the Joint Commission for the Accreditation of Health Care Organizations is to improve the quality of patient care in the United States.

Sophisticated American consumers demand quality in their healthcare. They have come to expect clinical competence and desire quality of life in the hospital. (Baukol, 1990). James Orlikoff (1990), author of Quality from the Top, Working with Hospital Governing Boards to Assure Quality Care, states that the 1990s will be a period of challenge and stress for hospitals. There will be severe pressure to provide quality with diminishing resources so healthcare organizations must have an internal commitment to quality.

While facing new economic realities, hospitals must improve quality, productivity and customer satisfaction. According to hospital executive V. Clayton Sherman (1990), hospitals have turned to "Total Quality Management" (TQM) programs because lack of hospital quality is real. He contends that TQM is the latest "bandaid" for poor management and that organizations such as hospitals will fail because they are not flexible and willing to change because of management systems out of control. In other words, hospitals will hire TQM staffs to set up quality programs as "window dressing" while executives who lack management skills will continue to do business as usual. Sherman does not believe

the majority of generalist hospital executives will be willing to make changes necessary for TQM in themselves or their systems.

Table 1.

JCAHO Standards for Nursing Care, 1991

NC.1	Patients receive nursing care based on a documented assessment of their needs.
NC.2	All members of the Nursing staff are competent to fulfill their assigned responsibilities.
NC.3	The Nurse Executive and other appropriate registered nurses develop hospital-wide patient care programs, policies, and procedures that describe how the nursing care needs of patients or patient populations are assessed, evaluated, and met.
NC.4	The hospital's plan for providing nursing care is designed to support improvement and innovation in nursing practice and is based on both the needs of the patients to be served and the hospital mission.
NC.5	The Nurse Executive and other nursing leaders participate with leaders from the governing body, management, medical staff, and clinical areas in the hospital's decision making structures and processes.
NC.6	As part of the hospital's quality assurance program, the quality and appropriateness of patient care provided by all members of the nursing staff are monitored and evaluated.

(Joint Commission 1991 Accreditation Manual for Hospitals p.131-139)

George Labowitz (1990), president of the consulting firm Organizational Dynamics, disagrees. TQM is as useful in healthcare as it is in business. It requires commitment to improving outcomes, services and products and should be related to performance management. TQM means continuous quality improvement, with management and professionals in the organization involved. (Sinoris, 1990). It is a management

system for continually improving performance at every level of business function. It is necessary in the hospital because patient care is becoming more complex, increased quality reduces costs and provides strategic advantage. (Fifer, 1990). It must be part of management's philosophy, because quality care + quality management = total quality management. (Tackett, 1990).

Recognition of nursing care as the central focus of hospital quality has caused a new trend in which hospitals are replacing chief operating officers with nurse executives who become vice presidents of clinical services. They are executives in charge of nursing, physical therapy, dietary, radiology, pharmacy, and other departments. The need for nurse executives with appropriate skills has spread beyond nursing for total quality in the hospital. (Souhrada, 1990).

Focus of the Dissertation

Management theorists remain divided on the appropriate education of managers. Research in the area of the efficacy of "professional" managers who are generalists versus managers promoted from technical disciplines has been limited. There is disagreement among professional educators regarding preparation needed by practitioners moving into administrative roles and where that preparation should take place. While some theorists argue that a generalist is the "best" executive, others claim that professionals need to be managed by leaders from the same profession with expertise power.

Futurists in both general management areas and healthcare predict changes in skill areas needed by business leaders for the next ten years. Research into where executives can best obtain "futurist" skills has been limited. Since quality is now considered to be strategic to all American and international business entities, research in appropriate executive education and preparation for the future is a part of total quality management. It is important for business' survival and health to seek quality leaders to manage quality organizations.

Hospitals have evolved from charity institutions to service businesses. Similarly, their administrators have evolved from being promoted practitioners with no management training to non-technical business managers to professionals with generalist management training. Guiding principles for operations have ranged from charity to bottom-line priorities to today's total quality management philosophies and practices. Nursing Services, as a primary hospital product, has changed along with the organizations. Current thinking about nurse executives' preparation places heavy emphasis on business understanding and total quality management. The focus of this dissertation addresses the appropriate preparation and training needed by nurse executives because of this evolution.

The MBA is now considered an essential prerequisite for any career in Business. (Muirhead, 1985). Hospitals are businesses so the trend toward nurse executives with MBAs

appears to be a logical conclusion. It does not address the concern of a need for expertise power.

The question of what is the appropriate preparation for nurse executives has been debated among nurse executives and practitioners. Some research has been done on what hospital executives and nurse administrators feel is the best educational background. Further research has compared job satisfaction and pay rates between nurses with MBAs and those with no formal business education. This dissertation was undertaken to determine whether there are self-perceived differences in management skill between those who have completed graduate studies in business and those who have not. In addition, this research addressed whether these perceived skills are the skills that will be needed in the future service organization. The focus was on one type of manager in a particular service industry, the nurse executive in the acute care hospital.

Based on the review of related literature, a number of issues have been identified for further investigation. The following researchable questions were identified:

1. What are the management skills needed by executives in service industries of the future?

   Specific research question: What are the management skills most needed by nurse executives in hospitals of the future?

2. What educational background will best prepare executives to possess needed management skills?

   Specific research question: Is the MBA the appropriate or best graduate educational background for nurse executives?

3. How do the perceived management skill profiles of health care executives compare with management skill profiles of executives from other businesses?

   Specific research question: How do the perceived management profiles of nurse executives compare with management skills profiles of executives from other businesses?

4. How do generalist managers with no technical background and managers promoted from technical backgrounds compare in the areas of identified needed management skills?

   Specific research question: How do executives in charge of nursing departments compare; i.e., is there a difference in management skill profiles of non-nurse executives in charge of nursing departments and nurse executives in charge of nursing departments?

The purpose of this dissertation is to address questions one through three. Question four, an important area of theory, was not practically researchable in the area of Nursing Administration because nurse executives are almost exclusively registered nurses. There was no opportunity for sampling non-nurse executives in nursing services.

The Problem

The general problem area addressed is the management preparation needed for managers in the next decade. This leads to the more focused problem of the management preparation needed for quality managers in the service industries. The specific problem addresses the management preparation needed by nurse executives in hospitals of the 1990s. The major objective of this research is to determine what experts feel are the necessary future nurse executive skills and whether MBA prepared nurse executives feel more prepared in these skill areas than non-MBA nurse executives.

This study contributes both to the general field of management and the specific area of Nursing Administration. The United States economy is moving toward more service industries each year, and Nursing Administration has been studied as a sample of business management in the service area, since healthcare is projected to be the largest service area of the economy. Quality in leadership is essential in the service industries in order for these industries to practice total quality management.

Definition of Terms

For purposes of this research, the following definitions have been synthesized from a review of the literature.

Management preparation is the formal education for careers in administrative roles.

Quality managers are management personnel who possess the skills and abilities necessary to fulfill the roles described by knowledgeable individuals as necessary for the future success of hospitals and hospital nursing divisions.

Service industries are companies, businesses and industries primarily engaged in providing personal service to customers rather than physical products.

Nurse executive is the top administrative nurse in an acute care hospital.

Experts are nurse executives, nursing university professors and nursing practitioners who have been recognized for their expertise and excellence in the nursing field by their nominations as fellows of the American Academy of Nursing (AAN) or have been elected as national officers in the American Organization of Nurse Executives (AONE) between 1988 and 1990.

MBA degrees refer to Masters in Business Administration degrees or the MBA/MSN combination degree.

Scope and Limitations

The executives studied were drawn from the population frame of the American Organization of Nurse Executives (AONE), which has over 3000 members. Only executives from civilian acute care hospitals were studied. Military hospitals and government organizations such as the Veterans Administration were excluded.

The expert population frame used to identify future skills needed by nurse executives was limited to individuals who were named Fellows of the American Academy of Nursing, or elected to national office in AONE. According to the American Organization of Nurse Executives (Nurse Executive, Nov. 1990, p. 3), "The AAN represents distinguished leaders who have been recognized for their contributions to nursing and health care." Although there are probably many other outstanding nursing leaders, an AAN fellowship represents recognition of nursing leadership excellence from the profession of nursing.

Election to national office in an organization of nursing managers also acknowledges leadership in the profession.

Assumptions

For purpose of the research, these assumptions were made:

1. Nurse executives have similar job descriptions and responsibilities in acute care civilian hospitals.
2. MBA degrees mean that MBA holders have had similar formal business and management coursework.
3. Assurance of total quality management in service industries requires well-prepared managers/leaders.

Significance/Contribution of this Research

Results of this study contribute to the "general field" of management by adding to the theory of what skills will be needed by executives of the future and whether generalist (MBA) management education prepares these executives better than other preparation. Nursing Administration is expected to gain from this research because the results contribute information on what recognized nursing leaders see as the skills needed by future executives and whether business education is needed to obtain these skills. The results contribute data for the argument of whether business education or professional (specialized) education is better preparation for the executive managing professionals (specialists).

In writing on advances in the professionalization of nursing for her doctoral dissertation, B. Peterson (1988) stated that the national model for the profession is a non-specialized BSN combined with a specialized masters degree for practice in areas such as administration. Karen Ehrat (1990), defining nursing administration as leadership in transition, wrote that definitions in leadership reflect fads and academic trends. The MBA is the current trend in nursing administration. Kathryn Harrigan (1990), concerned about professionalism in management education, asserted that the reason for management education is to improve management practice. She also stated that research output must be relevant to practice. This dissertation can be used to both of these ends. Practice can be improved by education only if

the education is relevant and needed for management practice. The results of this study are expected to contribute to the understanding of relevant education in the management and nursing administration fields, for the future needs of service industry business.

Research Hypotheses

The identified research questions lead to two hypotheses. Questions one and two contributed to hypothesis one, while question three preceded the belief expressed in hypothesis two. The research questions and hypotheses are:

RQ1. What are the management skills most needed by nurse executives in hospitals of the future?

RQ2. Is the MBA the appropriate or best graduate educational background for nurse executives?

H1. **Nurse executives with MBAs perceive their management abilities to be more closely resembling what nursing experts feel is needed for nurse executives of the future than nurse executives without MBAs.**

RQ3. How do the perceived management profiles of nurse executives compare with management skills profiles of executives from other businesses?

H2. **Ability self-perceptions of nurse executives with MBAs resemble the MP-JFI occupational profile of executives while the ability self-perceptions of nurse executives without MBAs resemble the occupational profile of middle managers.**

CHAPTER II

REVIEW OF THE LITERATURE

Background

As discussed in Chapter 1, this research was undertaken to address the question, "What is the appropriate preparation for future nurse executives in acute care hospitals?" The main issues were what skills will be needed by nurse executives of the future and what educational experiences provide these skills.

This chapter describes the literature review done as a background for these issues. The purpose of the review of the literature was to assess what has been reported in these areas:

1. The effectiveness of generalist managers versus professionals managing professionals in acute care hospitals.
2. The evolution of nurse managers into nurse executives.
3. Professional nurses' comfort with the executive role.
4. The education and responsibilities of nurse executives.
5. Nurse executive effectiveness.
6. Future skills needed by nurse executives.

The effectiveness of generalist managers versus professionals managing professionals is interesting because of the high numbers of professionals in hospitals. The first issue considered concerned appropriate backgrounds for the managers of hospital technical or professional workers.

Professional Managers or Manager Professionals

Hospitals are businesses which are dominated by professionals. This makes the question of whether they should be managed by professional managers or manager professionals especially interesting. Daniel Fogel (1989), Dean of the International Management Center in Hungary wrote a 1989 article about this characteristic. He feels that organizations dominated by professionals present management challenges not usually found in other businesses. The "professionals" have power because their services are in demand and their work is too complex to be supervised by "lay" managers. Control is extremely difficult and lay executives are powerful only while perceived as serving the professionals. Fogel felt that administrators are best when they come from the professional ranks. His specific contention was that physicians make the best executives in hospitals if they learn administrative skills.

Researcher Gerard de Pouvourville (1989) studied differences in how professionals (MDs), managers and others (politicians and social scientists) approach healthcare problems. He described and analyzed case studies concerned with diagnostic related groups (DRGs) in both the United States and France. His contention is that in current U.S. healthcare institutions, managers use bureaucratic rationality while professionals cling to "professional autonomy". These ideas clash. The future for hospitals is that professionals such as hospital physicians will assume

more and more of the managerial roles, since these approaches must be combined.

In hospitals, one proposal is to replace nurse executives who are nurses with non-nurse executives in nursing management roles. Three nursing professors, J. Giddens, K. Homan and B. Touns-Culton (1988) studied the attitudes of hospital and nursing administrators toward this idea. The study population included chief executive offices and nursing administrators from two geographic areas: East (New York, New Jersey, Massachusetts, Connecticut, Rhode Island, Pennsylvania) and West (California, Nevada, Arizona, New Mexico, Colorado). Seven percent of respondents currently had non-nurses employed in nurse management positions, but not in the chief nurse executive position. Administrators indicated that they are more receptive to this trend than hiring practices have reflected. In the East 27 percent and in the West 37.6 percent favored the idea of replacing nurse managers and executives with non-nurses. Their reasons for favoring non-nurses was the belief that they would have greater problem-solving ability and be more innovative. Disadvantages seen were lack of knowledge about nursing, lack of credibility and lack of understanding of patient care needs.

The CEOs also indicated that the best educational preparation for a nurse executive was a BSN plus an MBA. The researchers stated that nurses are turning to Schools of Business because of this opinion and because Schools of Nursing are failing to provide adequate management education.

In this study, respondents indicated that there is a need for nurse managers to obtain graduate education in business or be replaced by non-nurse business managers.

According to Curran's interviews with hospital leaders (1991) there is a national movement toward nurse executives having masters degrees in business. Business knowledge is necessary, but the best degree is the combined MBA/MSN. Interviewed nursing leaders stated MBAs cannot run nursing departments without knowing the profession.

Management authors Biggerstaff and Syre (1991) claim that leadership is more important than specific management or professional background for hospital leaders to thrive in the future. They define leadership as being able to promote human relations and goodwill, being a visionary, empowering employees, and being flexible.

The two trends mentioned here are opposites, with some literature calling for more professionals at the top of the hospital hierarchy while there is research showing administrators are receptive to replacing nurse executives with generalist managers. The former trend is supported in the following literature describing the evolution of nurse executives from middle managers to administrators.

The Evolution of Nurse Executives

Nurses with management roles have occupied different levels in hospital hierarchies at different times in history. Writing about nurses in administration, West (1987) chronicled

the history of nurses in corporations. She stated that nurses were once the administrators of hospitals. Their positions changed in the early 1900's when people with business backgrounds and no clinical training took over. Nursing executives have had weakened roles because they were not prepared for bottom-line games played by business leaders. Now they have learned that they can not be promoted into line positions unless they have managerial experience and graduate business degrees. Nurses who desire to become corporate officers have found that they need MBAs combined with clinical knowledge. To remain in powerful jobs, the nurses must learn to analyze organizational power structures and play corporate politics.

From the early 1900's to the 1970's, the top nurse managers most often found themselves relegated to upper middle management roles. They were responsible for the care of patients while the business decisions for the organization were made by physicians or generalist managers. For the past twenty years, nurse leaders' roles have gradually evolved so that the majority of top level nurses are considered part of the top management team.

Nurse researchers Price, Simms and Pfoutz (1987) surveyed nurse executives to see if career advancement of nurse executives was planned or accidental. Their results suggest that most nurse administrators lack education in management and must learn necessary skills on the job because they never planned management careers.

In a survey of members of the Council for Graduate Education for Administration in Nursing, Wilhite (1988) asked respondents to define the terms "nurse executive" and "middle manager." Their response showed that nurse leaders are defined by title, reporting relationships, or description of functions and responsibilities.

Those most likely to be described by responsibilities were nurse executives. Most common titles for executives were vice president, president, chief nurse executive and director of nursing. Middle manager titles included supervisor, head nurse, manager and director of nursing.

Respondents were asked to describe functions and responsibilities of nurse executives and middle managers. With some confusion about functions and responsibilities, respondents disagreed on defining the titles and reporting relations. The most frequent nurse executive functions listed were decision making, budget preparation, strategic planning, responsibility for multiple departments, staffing and representing nursing.

The evolution of nurse executives has paralleled the evolution of hospitals into business organizations. Seay and Vladeck (1988) outlined the history of hospitals in the United States. Before the Civil War there were few hospitals, mostly large philanthropic institutions. In 1873 there were only 178 hospitals nationwide. After the 1870s, the number of hospitals grew with either ethnic or religious backers. There were Jewish, Catholic, German, etc.,

hospitals. These hospitals were funded for the poor by charity from the middle class and wealthy Americans who were cared for in their own homes.

In the late 1890s, there were 6500 hospitals, and charity could no longer support them. Hospitals needed to attract the middle class to have paying customers who could pay for the new medical technology and cleanliness standards.

In the early 1900s the administrators in hospitals were men with medical and business backgrounds. In the 1930s, the University of Chicago offered the first MBA for healthcare administrators. Gradually over the next sixty years, hospitals developed community service and business missions. They came to be seen as businesses because they hired professional staffs rather than relying on volunteers and religious orders. Their identification with specific ethnic groups decreased. Dependence on philanthropy decreased as charges were set to cover costs. In the 1970s and 1980s a small percentage of hospitals became for-profit chains run as businesses. Today all hospitals are part of a competitive environment where they are expected to behave like businesses.

Dr. Pauline Johnson, Associate Professor at Northwestern State University used a 36 item Power Assessment Inventory to determine whether there were significant self-perceived differences between power of nurse executives and other hospital executives. Her data was collected from 96 chief nurse executives and 147 other executives at the same institutions.

According to Dr. Johnson, nurses get into the "inner circle" of power by dressing in business attire and believing that the hospital is a business organization. She found in her research that nurse executive's power exceeds that of other executives at the same level of management. This may be because they combine business techniques with knowledge of the clinical product. (Johnson, 1989).

Three historical researchers from the State University of New York compared biographies of 177 past nursing leaders and other disciplines' past leaders. They found that nursing leaders had significant educational achievements, tended not to marry and influenced both their profession and society. From their research, they stated that if women in the past had been given the same opportunities (outside of traditional "female" nursing education) they would have achieved at the same level as men. (Bullough, Bullough, Wu, 1989).

Barbara Mark, Jean Turner and Sheila Englebardt, of the Medical College of Virginia, reviewed graduate programs for nurse executives from the first program in 1899 to the current 74 masters programs in Nursing Administration. They described economic trends which have effected healthcare, including prospective payment methodologies. The researchers felt that the role of nurse executives is a peer role with other hospital executives, so CNEs are expected to have leadership, management and business skills. Their premise was that the most important responsibility of the nurse executive is to create and maintain a professional nursing environment. They

described nurse executive education as needing to focus on institution-wide issues with inclusion of an internship and education on research. (Mark, Turner, Englebardt, 1990).

Historical researchers Henry, Woods and Nagelkerk studied Florence Nightingale's life and writings to look at her perspective of Nursing Administration. They determined that she had a genius for managerial decision making and that her thoughts are applicable today. Nightingale felt that nurse administrators must be well educated. She wrote that they must be concise, decisive, disciplined and forceful and must be able to collaborate and manage complexity. They should be able to write well and communicate. They must learn about healthcare, social, political and economic complexities of management. (Henry, Woods, Nagelkerk, 1990).

Another study was done by nurse researchers in Chicago to investigate the relationship between interest in management and personality, demographic and career background of female nurses. Their research purpose was to contribute knowledge about nurses who seek administrative roles. Tools used were the Vocational Preference Inventory (VPI), a demographic data questionnaire and the Strong-Campbell Interest Survey. One hypothesis was that nurses at different education levels would exhibit different personality profiles. Other hypotheses were that nurses who demonstrate an interest in management would score higher on enterprising, social and conventional scales of the VPI than other nurses and that they would differ from other nurses in demographics.

Research results were that there were no significant differences between the demographics and backgrounds of nurses interested in management and other nurses. Nurses with different education levels did exhibit different personality profiles. As education increased, nurses had increased enthusiasm, dominance, conventionality and breadth of interest. (Quigley, Biordi, Gillis, Minnick, 1990).

Gardner, Kelly, Johnson, McCloskey, and Maas (1991) proposed a nursing administration model for administrative practice. Their proposal was based on the contention that nurse executives must now balance clinical nursing, management, science, and nursing administration. The nurse executive now has an expanded scope of responsibility, taking on the administration of non-nursing clinical and operational departments. Gardner et al. felt there is a need for widespread use of nursing problem solving models.

Wiggins (1991) pointed out that women are underrepresented at senior management levels in hospitals. If nurse executives were not predominantly female there would be a nearly total lack of female executives. While 80 percent of the workers in health care are female, only four percent of hospital CEOs are female. This appears to be because males are seen as assertive, self-reliant, and achievement-oriented while females are believed to be dedicated to service. The women who become executives start as clinicians and advance into management. While six percent of American women have advanced

degrees, 74.9 percent of female health care managers have Master's Degrees and nine percent have Doctorates. The top female manager in a hospital is the nurse executive in 96 percent of hospitals.

The Joint Commission for the Accreditation of Healthcare Organizations (Perspectives, Jan/Feb, 1991) points out that hospitals must allow nurse executives to have administrative roles. In order to be accredited, all hospitals surveyed by JCAHO after January 1, 1991 must be able to prove that the top nursing manager in the hospital collaborates with other hospital executives in the hospital's decision making process. The nurse executive must help develop, review and revise the hospital's mission statement, strategic plan, budgets, resource allocations, and general policies.

Dunham, Fisher, and Snelson (1991) pointed out that 85 percent of nurse executives are women. Their four year study on career decision points of nursing leaders showed that women managers value educational credentials more than men do. Nurses have turned to the business field for ideas about management. They have realized the need for advanced education to get into administration.

As nurse executive roles have changed and evolved, some researchers have been interested in how comfortable professional nurses are when they are promoted into administrative positions.

Professional Nurses' Comfort with the Executive Role

E. Ann Hillestad (1984) hypothesized that the role of the nurse administrator causes people in these positions to be professionally lonely. She surveyed 135 nurse administrators of which 47 percent reported that they were professionally lonely. This may in part be based on their power because power isolates individuals. Nurse executives have conflicting responsibilities, including fiscal responsibilities and the need to balance patients' needs with nursing staffs' needs. Nurse executives whose assistants or associates had similar educational backgrounds had more supportive relations.

In related research, Patricia Harris (1984) studied the phenomenon of "burnout" among nursing administrators. Eighty-four nursing managers in a Southwestern state were administered the Maslach Burnout Inventory which has four subscales: emotional exhaustion, personal accomplishment, depersonalization and personal involvement. The mean age of the group was 38.7 years, the mean number of years in present positions was 3.2 and the mean number of years in nursing was 13.5. Only ten percent of the respondents had Master's degrees and the type of Master's was not reported. She concluded that managers do suffer symptoms of burnout: disillusionment, fatigue and exhaustion relating to a profession. Some nurses who end up in formal management roles eagerly seek the job and then find they are not happy. They discover that administrative work in more difficult than perceived.

Numerof, Hendin, and Cramer (1984) looked at stress in both CEOs and chief nurse executives by surveying both groups. They found that chief nurse executives feel pressured by too many time demands and high self expectations for excellence. Other stressors were getting others to do their work, handling conflict and balancing home life and work roles. Coping with stress appeared to get easier as executives' tenure in administration, present position, and facility increased. Nurse executives reported their average hours worked per day as 11 and average days of vacation per year as 16.

Professors Burke and Scalzi of the University of Texas studied role stress of general administrators and nursing executives in hospitals. Scalzi's questionnaire to measure role conflict and ambiguity was administered to top level nurse executives in Los Angeles County. Burke's questionnaire was given to hospital executives in San Antonio, Texas. The results were that non-nurse executives had lower role conflict than nurse executives but not substantially lower. (Burke, Scalzi, 1988).

Simms (1991) pointed out that nurse executive roles are continually changing but always call for leadership skills and managerial competence. Some authors also feel that an executive in charge of nursing must have clinical nursing knowledge and research abilities. It is the integration of clinical and management knowledge that makes the effective nurse administrator. According to Simms, this is the reason

graduate education for nurse executives must coalesce patient care knowledge and business perspectives.

Women face challenging problems moving into administration as they deal with "loneliness at the top" (Gardner and Gander, 1992). Interviews with 20 nurse executives revealed that most had or wanted advanced education in business or administration in order to be able to work with male executives. Twenty percent stated that working with male administrators was a major stress area.

Role conflict may be the result of conflict between the professional's belief system and management responsibility. Researchers have looked at what nurse executives' responsibilities and formal education are in hospitals today.

Education and Responsibilities of Nurse Executives

Myrtle Aydelotte, RN, PhD, nurse consultant and former executive director of the American Nurses Association, published research on the hospital top nursing position in 1984. The data was obtained through an American Society for Nursing Service Administrators (ASNSA) project, in which a sample of ASNSA members were surveyed by mail. Of interest were the differences in responses of top nurse executives in the 1984 study to responses of another ASNSA sample of 1977. The changes studied were in role, functions, responsibility, accountability, titles and salaries.

The random sample of 500 nurse administrators returned 343 copies (68.6 percent) of the survey. Data was then

analyzed by both frequency count and cross comparison of selected data. The purpose was to develop a picture of top nurse executives.

The nurse administrators were 96.2 percent female. Two percent held Doctorate degrees, 61.6 percent had Master's degrees, and 25.2 percent had Bachelor's degrees. The type of Master's degree was not specified but respondents were asked to describe the field of study in which they held their highest degrees. Thirty-two percent chose clinical nursing as their major field. Twenty-four and a half percent stated nursing administration was their major. The other fields selected were: hospital administration and healthcare administration, 10.3 percent education and liberal arts, 8.6 percent. Eleven percent had more than one graduate degree, one of which was an administrative degree. The percentage with Master's degrees doubled from 1977 to 1984.

Education was correlated to titles, size of hospital and salary. No hospital above 500 beds had a top nurse executive without a Master's degree. The higher the degree, the higher the salary. (Aydelotte, June 1, 1984).

Other information from this study showed that 81.6 percent of nurse executives reported to the Chief Executive Officer of their institution. When asked to estimate the time they spent on various administrative tasks, the nurse executives responded that 82.6 percent were involved in planning the overall hospital budget. Ninety-three percent established the Nursing budget and 85.6 percent had full

responsibility for administration of that budget. (Aydelotte, June 16, 1984).

Nurse researcher S. Price (1984) mailed questionnaires to a national sample of nurse executives. Her research was undertaken to identify the essential components of master's level education for top nursing leaders. The returned questionnaires indicated that current working executives felt the number one need for nurse executive education was in principles of administration and management. The number two need was for education in finance and budgeting.

The functions and priorities of nurse executives were the subject of a study by Simms, Price and Pfoutz (1985). Thirty nurse executives were interviewed to determine their demographic characteristics and perceptions of administrative roles. Their answers, when analyzed, showed a perception that nurse executives must be image setters, change agents, people developers, trouble shooters, and spokespersons for Nursing. The trend toward graduate education for executives was apparent as was the need for financial understanding. The researchers stated that the nurse executive role calls for sophisticated leadership as well as management ability.

According to a Witt Associate Survey (1987), the nurse executive role, more than any other, is constantly changing and growing, with no end in sight to the change and growth. Their 1986 research, conducted through a national survey of chief nurse executives in hospitals with 250 of more beds, was another profile study. Their results showed that nine

percent of CNEs were associate administrators, 49 percent were hospital Vice Presidents, 15 percent were assistant administrators and 26 percent were titled "Director". Seventy-five percent had a Master's degree and 87 percent were members of the American Organization of Nurse Executives (AONE). One half of the executives with Master's degrees had those degrees in Business or Health Administration.

Mark Johnson, MPH, a nurse in St. Paul, Minnesota, researched in the area of nurse executive preparedness for financial management. The purpose of his study was to find what nurse executives perceive as needed for their own preparation in financial management. His assumptions included that financial management is needed for successful nurse executive practice and that training in finance will improve this practice.

Johnson surveyed 300 members of the American Organization of Nurse Executives. The data obtained showed that nurse executives, on the average, spent less than 50 percent of their time on financial management. Most respondents stated they received their fiscal management education through self-study and on the job training. However, the majority felt this education should have been included in Nursing Administration college curricula. (Johnson, 1987). Beth Ulrich, Professor at the University of Texas School of Nursing, noted that nurse executives state that graduate schools do not prepare nurse executives for the practice setting. Her research was a comparison of the value systems

of nurse executives and nurse executive educators. She used the Ohio Work Values Inventory (OWVI) to determine values and a Subject Information form to determine demographic information. Her samples came from practicing nurse executives who were members of the American Organization of Nurse Executives and graduate educators in Texas Nursing Administration programs.

Dr. Ulrich found that the two groups read different professional journals, with executives citing Nursing Management (62 percent), Journal of Nursing Administration (50.6 percent), Hospitals (48.1 percent) and Modern Healthcare (36.7 percent). Nurse educators preferred to read Nursing Research (44.4 percent), American Journal of Nursing (28.9 percent), and Nursing Outlook (28.0 percent).

Two value areas of significant difference between the two groups were in the area of control and solitude. The executives valued control more than solitude while the educators valued solitude more than control. (Ulrich, 1987).

According to Maryann Fralic, Senior Vice President at the Robert Wood Johnson University Hospital, the nurse executive of today is a blend of nurse and business person. Since hospitals must act as businesses, nurse executives must be well prepared as managers, with solid managerial skills. Her opinion is that education for nurse executives should take place in schools of nursing with course work designed to develop business acumen. In order to provide this, schools of nursing must link up with schools of business. However,

because knowledge is quickly outdated and we cannot know exactly what administrative skills are needed in the future, Nurse executives must be life long learners who have human, conceptual and technical skills. "Graduate education for nurses in leadership must include these areas:

- Business core and management cognates.
- Advanced nursing core, research, issues, roles and theory.
- Synthesized core in nursing administration.
- Concentrated residency or practical experience." (Fralic, 1987).

Diane Andrica, Senior Associate at Witt Associates, did a national study of nurse executives, whom she found to be 93 percent female, 74 percent under the age of 50, 54 percent married and 73 percent with Master's degrees. Her data showed that 45 percent of the executives held the title Vice President, with control of an average operating budget of 22 million dollars. The operating nursing budgets ranged from five million to 333 million dollars, or about 30% of the entire hospital budget. In this survey, chief executives were asked about the type of individual needed for the chief nurse executive position. CEOs and Chief Operating Officers wanted strong leaders who would inspire subordinates with strong management abilities and communication skills. Having a total hospital picture was important as was a financial orientation. (Andrica, 1988). Denise Autonberry, Education Coordinator at Mississippi Baptist Center, wrote of the need for nurse executives to know marketing. She describes the need for nurse administrators to have executive skills as the chief nurse executive role changes. Nurse executives need to

work well with non-nurses. They must be skilled at public relations, marketing and strategic planning. Her contention is that they must appear confident and professional. They must obtain masters education that includes research knowledge. (Autonberry, 1988).

The Assistant Director of Nursing Administrative Research at the University of Colorado, Karen Miller (1989), wrote that leadership training for nurse executives is essential. Nurses in administrative positions must have a "corporate perspective" and understanding of healthcare as a business. Corporate nursing leaders set policy, are involved in marketing, economics and strategic planning. They are forced to become business oriented and to adapt to business roles. They are required to be aggressive team players, analytical and unemotional.

Miller's contention is that nurse executives need education on how to fit into the business culture. Her list of areas where nurse leaders must be competent includes having vision, communication skills, the ability to establish trust and maintenance of strong self regard.

According to Dr. Heide Boerstler and Dr. James Suver of the University of Colorado, nurse executives often lack management preparation. They state that nurse executives need skill in financial management, marketing, human resource management, and health policy as well as nursing. They claim that many nurses want the MBA because it is the most universally accepted management degree. The University of

Colorado received a grant from the U.S. Public Health Service to offer a dual MSN-MBA degree for nurse executives and will in the future study the success of its graduates, the effectiveness of its curriculum, and student satisfaction. (Boerstler, Suver, 1989).

Dr. Eunice Blair, also a professor at the University of Colorado, wrote that Nursing Administration is a synthesis of knowledge from nursing and administration. She outlined the major debate about whether nurse executives should be educated in schools of nursing or business, and presented her "Synthesis Mode." In her model, nurse executives are both nurses and administrators. From nursing they must understand nursing definitions, the practice component, the discipline component, theory and research. From administration they need business, management, economics and finance. (Blair, 1989).

Hypothesizing that the dual degree or synthesis education is appropriate for nurse executives, Professors Scalzi and Anderson of the University of Colorado, surveyed nurse executives and CEOs in a random national survey. Respondents were asked about their perceptions of the best education for nurse executives by filling out a forced choice questionnaire. The choices were an MSN, MSN/MBA or PhD in nursing administration. The nurse executives were asked which degree would improve their marketability while CEOs were asked to rank the importance of four characteristics of nurse executive job applicants. The characteristics listed were experience,

education, appearance and an administrative residency.

Seventy-five percent of the nurse executives and 65 percent of the CEOs selected the MSN/MBA degree as the educational preparation of choice for nurse executives. Only two percent of CEOs and eight percent of nurse executives saw the PhD as necessary. The CEOs rated previous experience as a nurse executive as the most important characteristic of a nurse executive applicant. The author's contention was that nurse executive business education could be best acquired through study in business schools, while nursing professional education should take place in the school of nursing. (Scalzi, Anderson, 1989).

A study at the University of Rochester sampled 46 graduates of a nursing masters program three to five years after graduation. The focus was on the respondents' current administrative responsibilities, administrative content in their graduate curriculum and future goals for involvement in administration. Forty-four percent of respondents felt the most important administrative function of a nurse manager was participation in evaluating conditions, resources and policies for the delivery of nursing care. Planning and policy setting was listed as the most frequent administrative duty.

Respondents indicated that 22 percent had taken courses on administration in the schools of nursing, business or education. They stated their reasons were to acquire business background and prepare for future administrative work. Eighty-five percent felt their nursing graduate studies

should have provided more administrative content. The researchers found that nurse executives feel a need for a business degree. They contend that nurse executives need advanced clinical knowledge as well as business skills so that the dual MSN-MBA program is the best education to prepare nurse executives of the future. (Radke, McArt, Schmitt, Walker, 1990).

Chief nurse executives studied in 1990 (Poteet, Hodges, Goddard, 1991) were found to have critical fiscal and budgetary responsibilities. A sample of nurse executives was drawn from the membership list of the American Organization of Nurse Executives and asked to fill out a 37 item questionnaire. The major findings of this research were that 1. financial management competency in budgeting and computer skills are essential to CNEs and 2. most nurse executives gain their financial knowledge through on the job training. Of the 359 nurses surveyed, 44 percent had MSNs and 22 percent had other masters degrees. Of those without MSNs, 36 percent had MBAs. The subjects stated that knowledge of finance was their greatest educational need.

According to another survey of 397 senior nurse executives (Sabatino, 1991), their position is growing in authority and responsibility. Nurse executives now control non-nursing hospital departments and increasing portions of the hospital budget.

Ballein (1991) completed a survey of senior nurse executives to establish a nurse executive profile. The most

common title for executives in this survey was vice president. The mean tenure for CNEs was found to be 4.7 years, and 49 percent of the executives were promoted into their positions. Their average work week was 55.77 hours. The respondents were asked to show how they spent this time and how they wished they could spend it. Their seven most common activities in order of percent of actual time spent were daily operations, team building, interactions with senior staff, financial management, planning, crisis management, and physician relations. Their preferred or ideal percent of time would have been spent in this order: planning, team building, interactions with senior staff, daily operations, physician relations, financial management, and crisis management. When asked to select five key personal strengths, 92 percent chose leadership. Eighty-five percent chose interpersonal skills. Seventy-eight percent selected problem solving. Seventy-three percent stated they were strong in operations management. Seventy-one percent cited their team building skills.

The average CNEs age was 45. Ninety-five percent were female, and 100 percent were RNs. Eighty-eight percent had masters degrees. Thirty-five percent had masters degrees in nursing and eight percent had MBAs. Other specified graduate degrees were in education, administration, and public health. Respondents were positive about their education with 51 percent stating they had been very well prepared for their present positions. Forty-six percent said they had been

prepared "acceptably." Thirty-six percent indicated the desire to pursue an MBA.

Nurse executives have reported an increased span of control and associated responsibilities in the past ten years. (Blouin and Brent, 1992). Work requirements have become more complex due to the economic uncertainty of healthcare, and nurse executive turnover is on the rise. A 1985-1989 study in Illinois showed that 90 percent of CNE terminations were not voluntary. The question of CNE competency in necessary job areas was not discussed as an underlying reason for the terminations.

Other research has been done to determine the effectiveness of nurse executives. Some correlated effectiveness with educational backgrounds.

Nurse Executive Effectiveness

Management researchers Guthrie, Mauer, Zawacki and Couger (1985) revised an instrument called the Job Diagnostic Survey to develop the Health Professional Motivation Inventory (HPMI) in 1985. The tool is used to measure how well motivated members of a specific employee group are in their jobs. They defined the purpose of their research to:

1. Develop a national data base for various health jobs.
2. Establish the norms for meaningful health jobs.
3. Determine the ideal fit between health personnel growth, needs, strengths and motivating potential of their jobs.
4. Develop an applied methodology for efficiently and effectively diagnosing and comparing specific jobs in specific hospitals.

They were particularly interested in the level of nurse executive motivation, whether nurse executives occupy jobs matching their growth needs and how they compare with managers in other industries. The HPMI was administered to nurse executives in Colorado, with mean values then compared to values previously computed for other managers who had been administered the Jobs Diagnostic Survey. There were significant differences found in areas of 1) skill variety, 2) task identity, 3) autonomy, 4) general satisfaction, 5) satisfaction with supervision, and 6) pay satisfaction.

The researchers stated their results predict high productivity, quality, low absenteeism and high job satisfaction for nurse executives. The nurse managers scored higher than the other managers in these areas. They had high task identity, reported high level of autonomy and high job satisfaction.

Cynthia Freund (1985), Associate Professor at the University of North Carolina, studied nurse executive effectiveness by studying perceptions of Directors of Nursing and Chief Executive Officers. Her questions were "1) What makes an effective and successful nurse executive? and, 2) How should we train them?"

Dr. Freund mailed questionnaires to 250 Directors of Nursing and their Chief Executive Officers at 250 university affiliated hospitals. The number one reason for nurse executive effectiveness chosen by both groups was knowledge in management, health and nursing. This category included

knowledge of finance, accounting, computer literacy, the nursing profession, healthcare trends and productivity management. Freund stated that both groups felt understanding of the profession is just as important as general management.

Second to knowledge was human management skill, including communication, sensitivity and humor. CEO's cited total organization view as the third most important factor in CNE effectiveness. The nurse executives rated this fourth in importance while they selected CEO support as number three. Nearly three quarters of the nurse executives held advanced degrees. Sixty percent of these were Masters in Nursing while eight percent were MBAs or MHAs. Freund surmised from her research that education for nurse executives should include general management, accounting, finance, human resources management and information management.

In related research, D. Bradham (1985) surveyed hospital Pharmacy managers and asked them to rank the academic areas important to their success as managers. The results were that directors with MBAs believed they were adequately prepared for their administrative roles while those with Pharmacy Doctorates or BS degrees did not.

With or without business degrees, hospital executives have compared well with other executives in the area of management effectiveness. Two management professors, Edward Interrieden and David Allen, worked with a professor in Physical Therapy on a comparison study of hospital executives

and managers in the general business community. Comparisons were made between physical therapy managers, hospital administrators and managers in the business community. Comparisons were then made between male and female management characteristics. Finally, comparisons were made to assess management effectiveness by using personality traits. Nine hundred and eleven lower level hospital managers and their supervisors (hospital administrators) were surveyed. Also surveyed were managers from banking, light manufacturing and heavy industry.

The instrument used in this field survey was the Ghiselli Self Description Inventory and the data was analyzed with multiple discernment analysis. The results showed that hospital managers did not differ significantly from general business managers. The hospital managers, at both levels studied, had stronger occupational achievement needs, but otherwise there were few important differences between them and other managers in this study. (Interrieden, Nosse, Allen, 1987).

A study at Columbia University Teacher's College was undertaken in 1988 to determine whether there was a significant difference between leadership effectiveness of nurse executives with different educations. Seventy-five nurse administrators were compared, using the Leadership Effectiveness Adaptability Description - Self Instrument developed by Hersey and Blanchard (1972). The educational degrees studied included the Master of Nursing, Master of

Nursing Administration and Master of Administration or Management. Significantly higher scores of leadership effectiveness were found for nurse executives with Master's degrees in Administration than executives with clinical Nursing graduate degrees. (Kozalka, 1988).

Doctoral student Kate Moore and three of her professors at the University of Illinois completed a nationwide survey to rank seven characteristics of nurse executive effectiveness. The sample consisted of 500 community hospitals out of a population of 1218 short-term, not-for-profit, non-government and non-university based organizations. The instrument listed seven characteristics of executive effectiveness described in previous research, and was administered to both chief nurse executives (CNEs) and chief executive officers. Demographic data was gathered on salary, education, age, gender, and tenure in management, position, and hospital. From this study, the results were reported according to ranking by CNEs and CEOs. Both groups ranked human management skill as the most important characteristic for effectiveness (32 percent). CEOs ranked total organization view (23 percent) second, general management skills (20 percent) third, and support for the CEO (12 percent) fourth. CNEs ranked CEO support second (22 percent), management knowledge third (16 percent), and total organizational view fourth. On comments added to the survey form, 39 percent of the CNEs and 27 percent of the CEOs stated financial knowledge and business skills were essential

for CNE success. The highest degree held by 34 percent of the CNEs was the MSN, while 13 percent had an MBA or MHA. The MBA or MHA was held by 71 percent of the CEOs.

The researchers concluded that CNEs and CEOs who work together differ in their assumptions about important administrative skills. CNE success may depend on the CEO's perceptions. (Moore, Biordi, Holm, McElmurray, 1988).

A study funded by the University of Akron was published in 1990 entitled "Nurse executive profile of excellent nursing leadership". A convenience sample of 85 "excellent" nurse executives was selected from a list compiled by asking for the names of excellent nurses from nurse executives, nursing administrative faculty and other nursing administration personnel. The names that surfaced repeatedly were given preference for selection.

The executives identified as excellent were interviewed by phone or in person. They were asked to describe excellent nursing leadership and their own strengths and weaknesses. The results were that nurse executives define excellent nursing leaders as having education, business skills, understanding of leadership and clinical expertise. Nurse executives must be team players with good negotiation, marketing and communication skills, combined with strong value systems. They respect people, empower others, select excellent staff and continuously grow and learn. Specific business skills identified were budget, finance, resource management, planning, systems analysis and personnel management.

Strengths listed for excellent nurse executives were vision, people skills, self confidence, honesty, hard work and ability to see strengths and weaknesses. Weaknesses included dislike of paperwork, number crunching and detail work. (Dunham, Fisher, 1990).

A descriptive study of staff nurses' perceptions of what makes a good nurse executive was conducted by Mary Meighan (1990) of the University of Tennessee Medical Center. She used an interview and questionnaire to sample registered nurses and LPNs at two Tennessee hospitals.

Her participants felt that a nurse manager needed experience, advanced knowledge, clinical competence and greater than average ability. Assertiveness, respect for other nurses, flexibility and caring were all responses. No business skills were mentioned. Concern for staff was the most important characteristic followed by clinical experience.

An assistant professor at the Intercollegiate Center for Nursing Education in Spokane, Washington, researched the leadership behavior of chief nurse executives. She studied CNEs in acute care hospitals in the five county San Francisco Bay area. Her survey, mailed to 66 nurse executives, used the Leader Effectiveness and Adaptability Description, Self (LEAD-S) to measure leadership style and effectiveness. The tool is used to determine the respondent's adaptability. Demographic information was also gathered on years experience

as a nursing administrator, years in current CNE position, education, ANA Certification, organization of nursing department, size and type of hospital.

The results were that 54 percent of CNEs use a "selling" leadership style while 30 percent use "participating". Delegation was not chosen by any nurse executive as a first or second choice of leadership style. Among her findings were that nursing administration experience was not correlated with leader effectiveness. However, effectiveness did correlate positively with the executive's educational level. American Nurses' Association Certification in Administration was not significantly related to effectiveness. (Adams, 1990). Believing that transformational leadership is essential for today's nurse executive, Dunham and Klafehm (1990) administered the Multifactor Leadership Questionnaire to 80 nurse executives who had been perceived as "excellent" by their peers. The questionnaire was given to the executives along with questionnaires administered to 213 of their subordinates who were asked to evaluate the nurse executives. The executives ranged from age 30 to 60+ years. All but two had advanced degrees, with 71 percent in Nursing and 29 percent in non-nursing areas.

The transformational qualities were defined to include being change agents; being courteous; believing in people; having the ability to deal with complexity, ambiguity, and uncertainty; and being life long learners. Research results

showed that nurse executives are mostly transformational leaders.

The study also looked at transactional leadership qualities defined as concern with personal goals and agendas and being able to participate in shared partnerships. All nurse executives had transactional scores but every individual's transformational score exceeded the transactional score. Executives with advanced degrees rated themselves as higher in transformational qualities. At the .05 significance level, people with master degrees in nursing were rated by subordinates as more transformational than those with master's in other areas.

In a nationwide study, Patz, Biordi, and Holm (1991) surveyed chief nurse executives and middle managers about what makes managers effective. The ten characteristics rated were:

1. Human management skills.
2. Support of the CEO
3. Support of the chief nurse officer
4. Flexibility
5. Total organizational view
6. General management knowledge
7. General nursing skills
8. Fiscal management skills
9. Good sense about organizational issues
10. Medical staff relations. (P. 17)

Most of the characteristics were rated as equally but not strikingly important for effectiveness. The highest score for importance to job effectiveness was in human management skills while the lowest went to general nursing skills. Second in importance was flexibility.

In this study, 66 percent of the chief nurse executives had nursing master's degrees. Twenty-six percent had some other type of master's. Their age ranged from 37 to 65 years. Only two percent were males, and they managed budgets from 10 million to 238 million dollars.

The American Association of Colleges of Nursing (AACN) completed a three year descriptive study of graduate nursing education in late 1990. One area of particular focus was on educational resources devoted to Nursing Administration. AACN's findings were that there were 109 nursing administration graduate programs in 1990. Six months after graduation from their Master's program, 56 percent of the graduates worked in acute care/hospital settings. Forty-five percent of the new graduates reported that after half a year on the job they felt very well prepared for their current positions. (Staff, Nurse Executive, Jan. 1991 p. 1)

A statewide Florida study (Sorrentino, 1992) was conducted to investigate the educational preparation, professional expertise, experience, and ideal competencies of CNEs. When chief executive officers were asked about the ideal education for the nurse executive, 33.3 percent preferred the MSN. Forty percent wanted to hire MHAs and 25.9 percent felt the MBA was the degree of choice. CEOs felt they could not hire the ideal candidate because of a lack of credentialed executives, salary restrictions, and recruitment difficulties in Florida. CEOs expressed desire for CNEs who are articulate in financial language as well as in nursing. Areas where CEOs felt CNEs are not as strong as desired include leadership,

accounting, finance, strategic planning, change process, budgeting, and resource allocation.

Researchers have gone beyond the question of current effectiveness. Some have examined what skills will be needed by nurse executives of the future.

Future Skills Needed by Nurse Executives

Researcher Pamela Hermansdorfer (1989) reviewed 220 articles and analyzed them by using a 29 item Nursing Administration Research Instrument. She found that nurse authors agree that nurse executives need to be able to integrate knowledge of nursing, management, and business theories. Some, however, feel that there is an imbalance of humanities and science in business education. Seeing MBAs as too narrowly educated, they advocate the hybrid degree, the MSN/MBA. A Delphi study in 1989 showed that nursing administrators and staff nurses strongly agreed that general education for nurses is best learned in a master's program but that the programs do not have to be in Nursing. The respondents felt that a multidisciplinary master, like the MBA, will better serve healthcare professionals of the future. (Hill, 1989).

Three hundred nurses with MBAs were identified and surveyed for the Commonwealth Fund by Louis Harris and Associates. They found that nurse MBAs get more management responsibility than non-MBAs. Finance and marketing were the most valued skills, and 88 percent of nurse MBAs felt other nurse executives should get MBA degrees. Although patient

care aspects of nursing are considered essential, the respondents felt nurse executives of the future must have superior management skills in order to productively use shrinking resources. (Staff, Hospital Topics, Winter, 1990).

Faculty at the University of Iowa have proposed a model for future nursing administration. It describes the scope of knowledge needed by nurse administrators, provides a structure to organize this knowledge and sets up a framework for educating future nurse leaders. The model shows future nurse executives will retain responsibility for delivering patient care, managing all patient care services, maintaining quality and cost efficiency, and holding community leadership positions. Nurse executives will need to know how to manage internal and external organizational change. They will be required to be competent in research theory, personnel management, financial management, decision making, and marketing. (Gardner, Kelly, Johnson, McCloskey, Maas, 1991).

Summary

The review of literature shows a movement toward clinically trained nurses gaining generalist management skills in order to fill hospital executive positions. The registered nurses who manage nursing divisions have become executives in the past two decades and are beginning to have administrative responsibilities outside of the nursing division. Researchers describe a wide range of responsibilities while studies show a preference by CEOs and nurse executives for business education. Nurse authors admit

to a lack of formal management preparation for promoted nurses and generally recommend the MBA or MSN/MBA for nurse leaders. Those who have obtained business degrees are paid higher salaries and feel more confident in their own management abilities.

While the research about future skills for nurse executives is limited, the studies which have been published recommend MBA or MBA/MSN degrees for preparing future nurse leaders. Studies on executive effectiveness have not correlated the MBA degree with higher effectiveness nor linked MBA education with specific skills needed for the next ten years.

The research for this dissertation focused on what skills would be needed by nurse executives for the next ten years and whether a graduate degree in business causes a nurse executive to perceive he/she has the identified skills. This focus was chosen because management theory should be based on research. Current literature describes research on "opinions" that general graduate education in business is needed for current and future nurse executives. The next step is to study what nurse experts feel are the most important specific management skills for future nurse executives and then to see if MBA education makes a significant difference in nurse executives' perceived ability in these skill areas. This is the research presented here.

CHAPTER III

METHODOLOGY

INTRODUCTION

Hospitals have been considered businesses as opposed to charity organizations for about 20 years. Nurses in charge of hospital nursing divisions are now called Chief Nurse Executives (CNEs), and they are responsible for hospital patient care activities as well as associated fiscal management activities. A current problem for those who educate Nurse Executives and the hospitals who employ CNEs is the appropriate education for the people in these positions. Some Schools of Nursing and nursing leaders feel that executives in charge of a clinical profession should have advanced education in that profession. Research on what hospital CEOs and nurse executives feel is appropriate education for nurse executives has repeatedly shown a preference for business education. A compromise position taken by a growing number of universities is a dual degree, the Master of Science, Nursing/Master of Business Administration (MSN/MBA) for nurse executives.

Nurses leading nursing divisions may be considered either hospital executives or middle managers. The literature demonstrates the former is the most commonly published

viewpoint. As administrators in charge of one of the largest acute care hospital products in a health care industry, representing one-eighth of the U.S. economy (Ginzberg, 199), they should be quality executives, appropriately prepared for their positions.

The health care field and the Nursing profession will benefit from research into the area of what skills will be needed by nurse executives of the future and whether business education is needed to obtain these skills. The general field of management will benefit by gaining additional information for the theory of what skills will be needed by future executives and whether generalist (MBA) management education prepares these executives better than other preparation. Research will contribute data for the argument of whether business education or professional (specialized) education is better background for the executive managing professionals. The skills needed for these executives for the next ten years should be taught in their educational programs.

Research Questions

The specific questions this research addressed included:

1. What are the most important skills needed by nurse executives for the next ten years?
2. Which nurse executives feel more confident that they have these skills-nurse executives with MBAs or those with no business education?
3. Do nurse executives feel they have management skills more similar to those of an executive or those of a middle manager?
4. Which group of nurse executives (MBA or non-MBA) have self-perceived skills which more closely resemble the skills felt to be important by multi-industry executives?

Research Approach

Both exploratory and explanatory research was included in the research approach. The exploratory research was accomplished before the explanatory steps. Step one of exploratory research included a survey of the Fellows of the American Academy of Nursing (AAN) and national officers of the American Organization of Nurse Executives (AONE) to determine their beliefs about what skills will be most needed by nurse executives of the next ten years. In step two, a questionnaire was mailed to nurse executives to determine their perceptions of their own management skills. In step three, a comparison was made of nurse executives' perceptions of their management skills with the perceptions of executives and middle managers from a variety of industries on the importance of these skills to their jobs. Data for this step was obtained from London House, publisher of the research tool used for this dissertation.

The explanatory research was done using data obtained in the exploratory stage and was undertaken to account for differences in self perceived management skills between nurse executives. An expected explanation was that the MBA degree would make a difference in management skills. Nurse executives with MBAs were compared to nurse executives without MBAs. Scores for each of these groups were then compared with the experts' scores on the importance of a variety of job tasks. Then both groups' scores were compared to scores of executives and middle managers from a variety of industries on the importance of different job tasks.

Population Frames and Sampling

The population frame identified for step one was defined as experts in nursing administration. To be included in the frame, an individual was a fellow in the American Academy of Nursing (AAN) or an elected officer of AONE between 1988 and 1990. A sample of 50 experts were selected after the national AONE officers' names were alphabetically inserted in the 1990 list of AAN fellows and all names were numbered. A table of random numbers was used to select the sample. According to the American Organization of Nurse Executives, "The AAN represents distinguished nursing leaders who have been recognized for their contributions to nursing and health care. (Nurse Executive, November, 1990). Elected officers of AONE were included in the population frame because election to national office in an executive organization is an acknowledgment of leadership in the profession.

The population frame for step two of the exploratory research included hospital nurse executive members of AONE who are not employed in military or government hospitals. A random sample of 100 nurse executives from AONE's membership list was selected after members were numbered. A table of random numbers was used. Names of executives from military or government hospitals were discarded.

The data from London House which was used for the explanatory research consisted of scores from executives and middle managers who had previously completed the research tool. This was available in the research manual which

accompanied the instrument described below. The standard deviation, raw scores, and normalized standard scores of 883 managers were supplied.

Instrumentation

The research instrument used was the Managerial and Professional Job Functions Inventory (MP-JFI). This is a standardized, quantified instrument consisting of 140 items which describe 16 general managerial or professional functions. There are two forms of the inventory. The first, which was sent to the first sample (the experts), is used to rate the items by importance to the position being rated. The second form, which was sent to the nurse executive sample, instructed the respondent to rate the items according to his/her perceived ability to perform them.

MP-JFI Development

The MP-JFI was first developed at the University of Chicago and is published by London House. (Baehr, Lonergan, Hunt, 1988). Its trial form consisted of job items derived from management job descriptions and job clarification programs developed at the Human Resources Center at the University. It was designed to be given to management incumbents. The trial instrument was given to 600 respondents from first line managers through upper management personnel. Factor analysis was used to determine 12 job dimensions that were incorporated into a job description instrument called

the Work Elements Inventory. This was used for job analysis at the University's Human Resources Center.

In the late 1970s, the questionnaire was reviewed and expanded to incorporate new job dimensions created by changes in the economy and personnel practices. Two hundred trial items were administered to 893 managers. The response technique was a forced, four interval rectangular distribution. Respondents had to sort the items so that there were approximately equal numbers in each of four categories on an importance scale. The rating procedure resulted in a rectangular distribution for the total number of items but a normal distribution for individual items. The forced system was used because respondents tend to rate the majority of items as important to their jobs without making the hard judgements identifying critical items for success.

The MP-JFI Interpretation and Research Manual states:

> Using this forced distribution data, exploratory factor analysis was performed, using a principal axis factor extraction, Orthogonal (Saunders, 1962) and Oblique rotations. The solution yielded 16 underlying dimensions. The stability of the 12 dimensions in the preliminary form of the instrument is attested to by the fact that the original 12 elements all appeared again, in spite of a ten year lapse, a different response technique, and a different sample of employees. (Baehr, Lonergan, Hunt, p. 20).

Validity

The stability of dimensions points to the MP-JFI's content validity by demonstrating that it covers dimensions defined as relevant to management jobs in the two research

projects described. The content was determined by trial forms of the instrument given to working managers who sorted out job duties as relevant or non-relevant to managerial work. The generic job items sorted by the managers according to relevance were gleaned from a literature search, interviews with individual management incumbents and their supervisors, and observation and analysis of actual job performance.

The target population for the MP-JFI is three levels of management: Vice Presidents (executives), Middle Managers, and First Line Supervisors. The instrument has been used for managers in all types of organizations, and the dimensions studied have been shown to be stable and valid. Scores are interpreted by comparisons to scores of others who have completed the inventory. Normalized standard scores are used for the comparison; these are revised periodically as London House collects further results.

Characteristic occupational profiles have been developed as the MP-JFI has been used in various settings. Results of past MP-JFI research shows that top level managers perform similar functions in all types of hierarchies. The profiles of executives, managers and first line supervisors have been shown to be different. London House publishes and updates the numbers, standard deviations, means, and normalized standard scores for these three groups. Thus, it is possible to compare individual and group respondents' profiles and determine which of these three levels the individual or group most resembles.

Variables

The independent dichotomous variable for this research was the education of the nurse executive, i.e., "(MBA (MBA/MSN)" or "No MBA". The dependent variable was the self-perception of management ability. Management ability was defined by 16 factorially determined dimensions of the MP-JFI.

The MP-JFI dimensions are:

1. SETTING ORGANIZATIONAL OBJECTIVES: formulating the overall mission and goals of the organization; setting short-and long-range objectives which are significant and measurable and which incorporate future predictions; evaluating alternative structures for future organizational operations.

2. FINANCIAL PLANNING AND REVIEW: making economic decisions and managing capital assets; establishing a budget and independent controls to assure that the budget is met; maintaining accurate financial records using up-to-date procedures.

3. IMPROVING WORK PROCEDURES AND PRACTICES: analyzing, interpreting, and evaluating operating policies; initiating and formulating improved procedures and policies within the organizational structure; insuring that new procedures are installed smoothly.

4. INTERDEPARTMENTAL COORDINATION: understanding and coordinating the problems and work activities of different departments within the organization; using informal communication lines as well as work committees to gain and disseminate information across the organization.

5. DEVELOPING AND IMPLEMENTING TECHNICAL IDEAS: originating technical ideas and designs; translating technical ideas into feasible solutions to organizational needs; leading technical projects and writing appropriate reports; helping the organization to adjust to and evaluate technical changes.

6. JUDGEMENT AND DECISION MAKING: analyzing incomplete information to make decisions; being flexible in non-

routine decisions; acting upon decisions concerning resource and workforce allocation; accepting responsibility for the consequences of both one's own and one's subordinates' decisions.

7. DEVELOPING GROUP COOPERATION AND TEAMWORK: encouraging and building work group relations which will lead to better exchange of ideas, improved decision making, more open communication, higher morale and sense of purpose; recognizing destructive problems and conflicts within the work group.

8. COPING WITH DIFFICULTIES AND EMERGENCIES: efficiently working under pressure; effectively handling unexpected problems, day-to-day crises, and emergency situations; quickly analyzing operation breakdowns and setting priorities for action.

9. PROMOTING SAFETY ATTITUDES AND PRACTICES: taking responsibility for the identification and elimination of job safety and health hazards; promoting and communicating safety practices and regulations to employees; investigating possible job-related accidents and illnesses.

10. COMMUNICATIONS: monitoring and improving both external communication channels and internal upward and downward communication lines; developing, testing, and seeking feedback on one's own communication skills; conducting effective meetings.

11. DEVELOPING EMPLOYEE POTENTIAL: evaluating employees' present performance and potential in order to create opportunities for better utilization of their abilities; examining and responding to employee dissatisfactions; assisting others in overall career development.

12. SUPERVISORY PRACTICES: clarifying subordinates' job functions and responsibilities; motivating employees while maintaining discipline and control; seeing that subordinates maintain established standards of performance and accepting personal responsibility for those who do not.

13. SELF-DEVELOPMENT AND IMPROVEMENT: formulating self-improvement goals; using feedback from others to help assess one's own strengths and weaknesses; improving one's own skills by participating in developmental programs and by assuming new positions; coordinating personal career goals with organizational needs.

14. PERSONNEL PRACTICES: ensuring that the organization adheres to federal equal opportunity and affirmative action requirements in its employee selection procedures; keeping informed on current issues and procedures in employee selection; developing and implementing special recruiting and training programs for minority applicants.

15. PROMOTING COMMUNITY-ORGANIZATION RELATIONS: staying informed on community, social, economic, and political problems and their relevance to and impact on the organization; accepting responsibility for the ongoing relationship between the organization and the community; actively seeking information from and disseminating information to, the community about the organization.

16. HANDLING OUTSIDE CONTACTS: promoting the organization and its products to outside contacts and clients; handling and entertaining long-term clients, suppliers, and visitors so as to properly convey the organization's relationship with them; expediting customer's special requests and handling their complaints about the organization." (MP-JFI Interpretive and Research Manual, p. 1-2).

The dimensions described are those mentioned frequently in the reviewed literature concerning nurse executives and their responsibilities. Specifically mentioned as important to nurse executive effectiveness are competencies in dimensions 2, 3, 4, 7, 10, 11, 12, and 13. The reviewed literature mentions responsibilities of nurse executives including dimensions 1, 2, 3, 4, 6, 7, 8, 10, 11, 12, 13, 15, and 16.

Scale of Measurement for the MP-JFI Variables

Each of the 16 variables of the MP-JFI is assessed and measured by survey items written in non-technical language. There are 140 items, which describe activities performed in a

manager's job. Each variable may have from six to ten items contributing to it. For example, the variable "Financial Planning and Review" (dimension 2) has six items the respondent must rate, while "Personnel Practices" (dimension 14) has ten items. Respondents are asked to read each item and rate it as below average or above average according to how important the function is to a particular job or how well the respondent feels he/she performs the item. The nurse experts in sample one were asked to rate the items as below average or above average according to how important the function will be for nurse executives of the next ten years. Nurse executives in sample two were asked to rate the items according to their self perceived ability to perform them. Respondents were asked to rate about half the items above average and half below average on each page. Then, the respondents were required to classify about half of the "below average" items as "little or none" and half as "less than average". The above average items were rated half as "more than average" and half as "outstanding."

The scale has four ratings, which should each be selected about 25 percent of the time. As mentioned earlier, this is a forced choice system causing the respondent to make the discriminant judgements about which items are critical.

Each item in the MP-JFI was assigned a score according to the respondent's rating. "Outstanding" ratings received a score of four. "More than average" ratings were scored

three. "Less than average" ratings equalled a two. "Little or None" ratings were scored as a one. The scores for items contributing to each of the 16 variables were added to give a raw score for each of the factors. Since the number of items contributing to each factor varies, the raw scores were converted to normalized standard scores, provided in the MP-JFI manual and derived from a composite of responses of individuals who have previously completed the tool. It was the normalized standard scores which were used for comparison among individuals and groups.

Moderator variables were the information gathered in the demographic characteristics of respondents. These included the respondent's age, education, years in Nursing Administration, time in present position, and source of management or business training. A common variable, sex, was not used in this research because nursing is 97 percent female. The very small number of males which might have been included in the sample were not considered large enough to be significant in a comparison of males and females. Although random selection of the sample attempted to control the influence of these variables, they were measured to evaluate any impact they may have had on the research results. A copy of the demographic questionnaire is included in the Appendix D.

Hypotheses

This was both exploratory and explanatory research. The exploration portion of the research was essential before the explanatory steps. With data from the exploratory research, the explanatory research was conducted with the following hypotheses, derived from the research hypotheses listed on page 29.

H1: The self perceived management abilities of nurse executives with MBAs differ from the self perceived management abilities of nurse executives without an MBA.

H2: Nurse executives with MBAs perceive their management abilities to resemble what nurse experts feel is needed for nurse executives of the next ten years.

H3: The self perceived management abilities of non-MBA nurse executives differ from what nurse experts feel is needed for nurse executives of the next ten years.

H4: The self perceived management abilities of nurse executives with MBAs closely resembles the MP-JFI occupational profile of various industry executives.

H5: The self perceived management abilities of non-MBA nurse executives resembles the MP-JFI occupational profile of middle managers.

For this dissertation, the null and alternative forms of the five hypotheses were:

H1n: There is no difference between the self perceived management abilities of nurse executives with MBAs and nurse executives without MBAs.

H1a: There is a difference between the self perceived management abilities of nurse executives with MBAs and nurse executives without MBAs.

H2n: There is no difference between the self perceived management abilities of nurse executives with MBAs and the abilities which nurse experts feel are needed by nurse executives of the next ten years.

H2a: There is a difference between the self perceived management abilities of nurse executives with MBAs and the abilities nurse experts feel are need by executives of the next ten years.

H3n: There is no difference between the self perceived management abilities of nurse executives without MBAs and the abilities which nurse experts feel are needed by executives of the next ten years.

H3a: There is a difference between the self perceived management abilities of nurse executives with MBAs and the abilities which nurse experts feel are needed by nurse executives of the next ten years.

H4n: There is no difference between the self perceived management abilities of nurse executives with MBAs and the MP-JFI occupational profile of various industry executives.

H4a: There is a difference between the self perceived management abilities of nurse executives with MBAs and the MP-JFI occupational profiles of various industry executives.

H5n: There is no difference between the self perceived management abilities of nurse executives without MBAs and the MP-JFI occupational profile of various industry middle managers.

H5a: There is a difference between the self perceived management abilities of nurse executives without MBAs and the MP-JFI occupational profile of various industry middle managers.

Procedures

After the random sample of 50 nurse experts was selected, each expert was mailed a letter requesting their participation in this research. A copy of this letter is located in Appendix A. A stamped post card was included for the expert to reply as to whether he or she would fill out an MP-JFI. Each time an expert replied that they would not participate in the research, a new name was randomly selected until 50 respondents had agreed to be in the sample. The participating experts received a cover letter, demographic sheet, and a copy of the MP-JFI (Importance).

Returned MP-JFIs were hand scored and results placed in a Statistical Package for the Social Sciences (SPSS) file for preparation of a composite group profile. This profile represents the perceptions of nursing leaders as to what the skill profile for nurse executives needs to be for the next ten years.

Similar procedures were used for the second step in the exploratory research. The 100 executives who agreed to participate received a mailed cover letter, demographic sheet and a copy of the Managerial and Professional Job Functions Inventory (Ability). The returned MP-JFIs were scored for individuals so that a composite group profile of nurse executives with MBAs and a composite group profile of nurse executives without MBAs could be determined.

Each returned inventory was hand scored on the MP-JFI Score sheet shown in Appendix E. The raw scores were then converted to normalized standard scores. The norms corresponding to raw scores are available in the MP-JFI Interpretation and Research Manual. This data was placed in an SPSS file for analysis.

Analysis Techniques

Chapter IV details the analysis of the data obtained from the returned inventories. Analysis was accomplished by using the SPSS software to perform statistical analysis and data management tasks. The five hypotheses for this research were subjected to two-tailed tests. The cases were individual nurse executives. The independent variable of interest was

the education of the nurse executives while the dependent variable was the perceived management ability of the executives. The hypotheses state the proposition that different education causes different perceptions of management abilities.

The independent variable for all five was the education of the nurse executives. The dependent variables are ex post facto with inference of causation from correlation of graduate education to perceived management ability. As a cross sectional field study the data obtained indicates current perceptions of nurse experts and nurse executives. To analyze the asymmetrical relationships between the nurse executives' education and perceived ability, each hypothesis was subjected to sampling-theory testing. Statistical significance was determined by testing the null hypotheses. These were two-tailed tests.

Statistical independent samples t-tests were done in order to determine statistical significance between sample distribution means for each dimension. The significance level chosen was 0.05. Null hypotheses were rejected or not rejected based on critical values determined by the degrees of freedom and level of significance on a T distribution table. Further analysis, using analysis of variance (ANOVA), was conducted, using demographic data to determine if differences among nurse executives' answers might have been dependent on variable 17 through 20. Chapter IV outlines the analysis of research data.

CHAPTER IV

ANALYSIS AND PRESENTATION OF FINDINGS

Treatment of Data

The data analyzed in this research was obtained from returned MP-JFIs and demographic questionnaires. The computer program which was used was the Statistical Package for the Social Sciences (SPSS). Collected data was coded, annotated, labeled and placed in an SPSS file. This file was then used for determining descriptive and inferential statistics.

Each returned MP-JFI and demographic sheet was given an identification number when it was received by the researcher. The first three columns of the SPSS file were used to record the identification numbers.

The MP-JFI Interpretation and Research Manual describes how to hand score the inventories and convert results to normalized standard scores. A copy of the MP-JFI Score Sheet and how to score and convert results is located in the appendix. For clarity, Table 2 shows how one dimension, setting organizational objectives, was scored.

This was done for the 16 dimensions on the MP-JFI. The 140 items on the questionnaire were scored as a number "4" if the answer was outstanding; "3" if the answer was more 82 than

average; "2" if the answer was less than average; and "1" if the answer was little or none. The items' scores were transcribed into the raw score box on the MP-JFI. The raw scores were added for each of the 16 dimensions. These scores were then converted to normalized standard scores, which were variables one through sixteen. The MP-JFIs were scored for the individual and composite group profiles.

Table 2. Scoring Variable One: Setting Organizational Obj.

Item	RS
1	2
17	3
33	4
49	3
65	4
81	4
97	4
112	3
126	4
137	4
Sum RS	35
NSS	68
No. items	10

Raw score= RS, obtained from item rating 1,2,3 or 4

Normalized Standard Score =NSS, obtained from conversion table below.

Conversion Variable One: NSS Corresponding to RS

RS	NSS	RS	NSS
39	81	24	54
38	77	23	52
37	73	22	51
36	70	21	49
35	68	20	47
34-33	67	19	45
32	65	18	44
31	64	17	42
30	63	16	40
29	61	15	38
28	60	14	36
27	58	13	33
26	57	12	31
25	55	11	27

(Baehr, Lonergan, Hunt, 1988, p. 19)

The demographic information on each respondent was placed in the remaining columns of the first SPSS file:

Variable 17-Age: This was the respondent's age in years. Data was gathered in ranges; 20-25 years old, 26-35 years old, 36-45 years old, 46-55 years old and over 55 years old.

Variable 18-Education: This was college degrees earned. Data was collected with these value choices; 1. no Masters Degree, 2. Masters Degree in Nursing, 3. MBA, 4. MBA/MSN, 5. MHA, 6. Other Masters, specify_____, 7. Doctorate, specify_____.

Variable 19-Years in Nursing Administration: This was the total time as a manager in nursing. Data will be gathered in ranges; 1. less than one year, 2. one to five years, 3. six to ten years, 4. eleven to fifteen years, 5. sixteen or more years.

Variable 20-Time in Present Position: This was time employed in current position. Data was collected in ranges; 1. less than one year, 2. one to five years, 3. six to ten years, 4. eleven or more years.

Variable 21-Source of Business or Management Training: This was an indication of where the respondent learned about business and management; 1. Masters Program, 2. on-the-job experience, 3. self-study, 4. Seminars, formal courses, 5. other, specify.

Cases 001 to 058 were the nurse executives who returned the "Ability" MP-JFI. Additional columns in the SPSS file indicated the respondents' age, education, years worked in nursing administration, years worked in current position, and major source of management and business training.

Cases 059 to 087 were the nurse "experts" who returned the "Importance" MP-JFI. Additional columns in the SPSS file indicated the respondents' age, education, current job, and top nursing executive experience. Sample 088 to 092 were composite profiles of multi-industry executives from line,

professional, sales, and financial hierarchies who previously completed the "Importance" MP-JFI. Samples 093 to 096 were composite profiles of line, professional, sales, and financial multi-industry middle managers who had previously completed the "Importance" MP-JFI. These last eight composites had missing data sets because there was no available demographic information.

Using the frequencies and statistics command in SPSS, the statistics for the 16 SPSS dimensions for cases 001 to 058 were determined. These included the mean, mode, frequency and percent of normalized standard scores, range, standard deviation, median, maximum, minimum, variance, and skewness. It was then determined how many and what percent of the nurse executives had MBAs and how many did not. The years in present position, total years in nursing administration, age, and source of training were then analyzed for all nurse executives, as to frequency and percent of responses in each category.

The same statistical analysis was performed for the cases with MBAs only, followed by analysis of the non-MBAs. This resulted in composite profiles of how MBA nurse executives viewed their abilities and how non-MBA nurse executives viewed their abilities.

T-tests were performed on the dimension responses to each function by the MBA and non-MBA respondents. Differences which might be dependent on the demographic variables age, years in nursing administration, or time in present position were analyzed using the ANOVA command. The frequency and

percent of nurse executives' time in their present jobs, years in management jobs, age, and source of management training was calculated.

A statistical analysis was completed on the responses of the nurse experts who returned the "Importance" MP-JFI. This resulted in data on the mean, mode, kurtosis, skewness, minimum score, maximum score, range, standard deviation, median, variance, frequency, and percent of responses for the sixteen management dimensions.

T-tests were then completed to compare the following groups:

1. All nurse executive respondents to the "Ability" MP-JFI and the expert respondents to the "Importance" MP-JFI.
2. MBA nurse executive respondents to the "Ability" MP-JFI and the expert respondents to the "Importance" MP-JFI.
3. Non-MBA nurse executive respondents to the "Ability" MP-JFI and the expert respondents to the "Importance" MP-JFI.
4. MBA nurse executive respondents to the "Ability" MP-JFI and executive respondents from a variety of industries to the "Importance" MP-JFI.
5. MBA nurse executive respondents to the "Ability" MP-JFI and middle manager respondents from a variety of industries to the "Importance" MP-JFI.
6. Non-MBA nurse executive respondents to the "Ability" MP-JFI and executive respondents from a variety of industries to the "Importance" MP-JFI.
7. Non-MBA nurse executive respondents to the "Ability" MP-JFI and middle manager respondents from a variety of industries to the "Importance" MP-JFI.

For all statistical comparisons, the significance level of .05 was used. In addition, the MP-JFI comparison of profiles information documented in the MP-JFI Interpretation and Research Manual, was considered:

> As a rule of thumb, differences between importance and ability scores should be at least five normalized standard score points (one-half standard deviation) to

be noteworthy if the comparison is made between composite profiles.

The analysis of the profile data was used by the researcher to state whether or not this research supports the hypotheses stated.

Assumptions and Limitations

The executives studied were drawn as a sample from nurse executive members of the American Organization of Nurse Executives (AONE). It was assumed that the members of AONE were representative of all American nurse executives. Only executives from civilian acute care hospitals were studied. Military hospitals and Veterans Administration Hospitals were excluded because it was felt that the nurse executive job descriptions and route to promotion differs significantly between these organizations and civilian businesses.

The experts used to identify future skills needed by nurse executives were limited to individuals who were named Fellows of The American Academy of Nursing, or were elected to leadership positions in the American Organization of Nurse Executives. Although there are probably many other outstanding nursing leaders, an AAN fellowship or election to national office in an executive organization represents recognition of nursing leadership excellence from the profession of Nursing. It was assumed that all fellows and AONE leaders were experts in the field.

General assumptions were:

1. Nurse executives have similar job descriptions and responsibilities in acute civilian hospitals

2. MBA degrees indicate that MBA holders have had similar formal business and management coursework.
3. It requires well prepared managers to insure total quality management in service industries.

Presentation of Findings

Of the 100 nurse executives who agreed to complete the MP-JFI, 62 returned the completed tools. Of these, four were discarded because they were incorrectly completed. This left a sample of 58 practicing nurse executives. Forty-five of the executives who completed the "Ability" MP-JFI, or 77.6 percent, did not have MBA degrees. Thirteen, or 22.4 percent did have an MBA or a combination MSN/MBA degree. Of the 50 nurse experts who were selected, 31 returned the MP-JFI. Three of these were discarded, leaving 28 cases. Reasons for why there was not 100 percent return on the MP-JFIs are unknown. Postage paid return envelopes were included with the research tools. The instrument is not easy to complete, requiring at least 30 minutes and willingness to make rating choices. Two of the returned MP-JFIs were accompanied by notes expressing how difficult the respondents found them. One discarded ability tool was returned with a letter stating the nurse executive had started to fill it out but did not finish because it was too time consuming. It may be that other experts and executives decided the questionnaire required too much effort on their part.

In response to the question about time spent in their present jobs, 6.9 percent of the executives who filled out the "Ability" MP-JFI had been employed less than one year. Fifty percent had been in their present jobs one to five

years. Slightly less than 28 percent answered six to ten years and 15.5 percent replied eleven or more years.

Almost two percent had been in the nursing administration field for less than one year. The majority (62.1 percent) had been nurse executives more than eleven years, with seven percent stating one to five years and 29.3 percent at six to ten years.

When asked about their major source of management training, 36.2 percent said their Masters program while 43.1 percent learned through on the job training. Self study was the method used by 3.4 percent and 15.5 percent claimed they were trained through formal (non Masters degree) classes. The remaining 1.7 percent stated they learned to be managers some other way.

Nurse Executive Ability Scores and Variability

Table 16, located in Appendix H, displays composite statistical data on the 16 MP-JFI dimensions according to how all 58 nurse executives rated their ability to perform them. Table 17, which displays the same data for the nurse executives with MBAs while Table 18 shows the composite data from the non-MBA nurse executives.

In assessing their ability, the nurse executives displayed wide ranges in how they scored each dimension. The greatest variability was in dimensions 2 (Financial Planning and Review), 7 (Developing Group Co-operation and Teamwork), 8 (Coping with Difficulties and Emergencies), and 10 (Communication). The least variability was in dimensions 11

(Developing Employee Potential), 12 (Supervisory Practices), and 16 (Handling Outside Contacts). Such large values for variances indicate dissimilar executive responses. Analysis was continued to attempt a description of what might cause the underlying variability.

Among the nurse executives with MBAs there was also wide variance in self described abilities. Greatest variability was in Dimensions 3 (Improving Work Procedures and Practice), 6 (Judgement and Decision Making), 7 (Developing Group Cooperation and Teamwork), and 8 (Coping with Difficulties and Emergencies). The least variability was demonstrated in Dimensions 9 (Promoting Safety Attitudes and Practice), 12 (Supervisory Practices) and 16 (Handling Outside Contacts).

MBA Nurse Executives had a higher mean score on Dimension 1 (Setting Organizational Objectives) than the entire sample of nurse executives and less of a variance. For Dimension 2 (Financial Planning and Review) the MBAs also had a higher mean score and much lower variance. On Dimension 3 (Improving Work Procedures and Practice) however, the combined group of executives had both a higher score and much less variance than the MBA group.

The mean variance for the entire sample was 74.04 while for the MBA group it was 70.26. For nine of the 16 dimensions, the MBA group had a smaller variance than the combined group.

The non-MBA group of nurse executives had a mean variance of 70.9. Their highest variances were on the same dimension as the nurse executives with MBA; Dimension 2

(Financial Planning and Review), 7 (Developing Group Co-operation and Teamwork), 8 (Coping with Difficulties and Emergencies), and 10 (Communications). The lowest variance for both groups was for Dimension 12 (Supervisory Practices), but the non-MBA group did not have any other variances lower than 32. The highest variance was in the MBA group, for Dimension 7. The MBA group had smaller variances than the non-MBA group for ten of the 16 dimensions.

Comparison of MBA and Non-MBA Dimension Ability Scores

The results of the independent samples t-tests for each dimension as rated by the MBAs and non-MBAs are displayed in Table 19 in the appendix. The t-tests were used to answer the question of whether or not the difference between self perception of ability by nurse executives with MBAs and those without MBAs was significant. The significance level used was .05.

For each dimension, the observed significance level for the Levene test was obtained. If the significance level was smaller than .05, the unequal variance t-test was noted, and if it was larger than .05, the equal variance t-test was used. The observed significance levels associated with the appropriate t-test indicated whether there was a significant difference between the compared groups. Table 3 summarizes the statistics and conclusions about MBA and non-MBA differences on dimension scores.

Table 3

Comparison of MBA and non-MBA Ability Dimension Scores, Based on Independent Samples T-tests for Equality of Means

Dimension 1 (Setting Organizational Objectives)
Mean Difference= -8.68 t= -4.26 p= .134 significance= .001
MBA nurse executives rated their ability significantly higher.

Dimension 2 (Financial Planning and Review)
Mean Difference= -6.78 t= -2.02 p= .723 significance= .048
MBA nurse executives rated their ability significantly higher.

Dimension 3 (Improving Work Procedures and Practice)
Mean Difference= 4.78 t= 1.59 p= .181 significance= .118
No significant difference in MBA and non-MBA ability rating.

Dimension 4 (Interdepartmental Work Procedures)
Mean Difference= 4.72 t= 1.88 p= .690 significance= .065
No significant difference in MBA and non-MBA ability rating.

Dimension 5 (Developing Technical Ideas)
Mean Difference= -.179 t= -.060 p= .389 significance= .949
No significant difference in MBA and non-MBA ability rating.

Dimension 6 (Judgement)
Mean Difference= -6.54 t= -2.37 p= .067 significance= .021
MBA nurse executives rated their ability significantly higher.

Dimension 7 (Developing Group Cooperation)
Mean Difference= 3.49 t= .980 p= .990 significance= .333
No significant difference in MBA and non-MBA ability rating.

Dimension 8 (Coping with Emergencies)
Mean Difference= 9.65 t= 2.77 p= .938 significance= .008
Non-MBA executives rated their ability significantly higher.

Dimension 9 (Promoting Safety)
Mean Difference= 3.51 t= 1.49 p= .159 significance= .142
No significant difference in MBA and non-MBA ability rating.

Dimension 10 (Communications)
Mean Difference= -4.34 t= -1.34 p= .438 significance= .186
No significant difference in MBA and non-MBA ability rating.

Dimension 11 (Developing Employee Potential)
Mean Difference= -1.55 t= -.810 p= .694 significance= .422
No significant difference in MBA and non-MBA ability rating.

Dimension 12 (Supervisory Practices)
Mean Difference= .925 t= .730 p= .258 significance= .465
No significant difference in MBA and non-MBA ability rating.

Dimension 13 (Self-Development)
Mean Difference= 1.93 t= .830 p= .835 significance= .408
No significant difference in MBA and non-MBA ability rating.

Dimension 14 (Personnel Practices)
Mean Difference= 2.35 t= 1.11 p= .606 significance= .270
No significant difference in MBA and non-MBA ability rating.

Dimension 15 (Promoting Community Relations)
Mean Difference= -7.43 t= -3.60 p= .162 significance= .001
MBA nurse executives rated their ability significantly higher.

Dimension 16 (Handling Outside Contacts)
Mean Difference= .892 t= .480 p= .548 significance= .636
No significant difference in MBA and non-MBA ability rating.

For Dimension 1 (Setting Organization Objectives), the observed significance level was .001. It appears that the difference of 8.68 between the means of the MBA and Non-MBA cases was unlikely if the MBA and Non-MBA means were equal in the population of all nurse executives.

Dimension 2 (Financial Planning and Review) appeared to be significantly different between the executives depending on business education. The observed significance level of the Levene test was high (.723). Using the equal variance value for the T-value of -2.02, the significance level of the difference between the two groups' composite mean was .048.

Dimensions 3, 4 and 5 were not shown to be significantly different between the MBA and non-MBA cases. For Dimension 3 (Improving Work Procedures and Practices), the significance level was .118. Dimension 4 (Interdepartmental Co-ordination) had a significance level of .065. Dimension 5 (Developing and Implementing Technical Ideas) had a significance level of .949. Dimension 6 (Judgement and Decision Making) had a significance level of .021, with the MBA nurse executives rating themselves significantly higher. The significance level for the difference between the means of the two groups for dimensions 7, 9, 10, 11, 12, 13, 14 and 16 ranged from .142 to .636.

There were significant differences between the MBA and non-MBA responses for Dimensions 8 and 15. The non-MBAs scored 9.65 higher on dimension 8 (Coping with Difficulties and Emergencies) and the difference had a significance level of .008. MBAs scored 7.432 higher on Dimension 15 (Promoting

Community-Organization relations) at a significance level of .001.

These t-tests showed that nurse executives with MBAs rated their ability to set organizational objectives, do financial planning and review, use judgement, and promote community relations higher than the non-MBAs rated their ability. The non-MBA nurse executives rated their ability to cope with emergencies higher than the MBAs did.

Effect of Demographics on MP-JFI Ability Scores

In order to determine if the difference between the MBA and non-MBA responses to Dimensions 1, 2, 6, 8, and 15 was caused by the executives' experience rather than business education, an ANOVA procedure was performed. The question was whether or not the MBAs and non-MBA differed significantly in total years of administrative experience or years in their present positions.

The first ANOVA was run as an analysis of variance for the five dimensions with classification variables of years in present job and education (MBA or non-MBA). As Table 4 shows, the significance levels of "F" (the between groups mean square divided by the within groups mean square) for each dimension is greater than the .05 significance level. This indicated that if there was any effect on how the nurse executives rated the dimensions by years in their present jobs, it effected executives with MBAs and the non-MBAs in the same way. Differences between the MBAs and non-MBAs cannot be attributed to years in their present positions.

Table 4.

Analysis of Variance, Dimensions 1,2,6,8,15 by Nurse Executive Education (MBA or non-MBA) and Years in Job

Dimension	2-way Interaction F	Significance of F
1	.429	.733
2	.353	.787
6	.337	.798
8	2.247	.094
15	1.395	.255

Table 5 displays the results of a second analysis of variance of dimensions with factor of time in all nursing management positions and education (MBA or non-MBA). Again the significance level of F is greater than .05 for each dimension variance analyzed. If there was any effect of years in management positions on how executives rated the dimensions, it was the same for MBAs and non-MBAs.

Table 5.

Analysis of Variance, Variables 1,2,6,8,15 by Nurse Executive Education (MBA,non-MBA) and years in Nursing Administration

Dimension	2-way interaction F	Significance of F
1	1.49	.228
2	3.51	.067
6	1.17	.327
8	1.93	.170
15	1.35	.251

The Nurse Experts' Importance Scores on MP-JFI

Table 6 shows the composite statistical data on the sixteen MP-JFI dimensions according to how nurse experts rated them on importance to the role of nurse executive. The experts' judgement of importance had less variability than

the nurse executives' self perceptions of their ability to perform them. With a mean variance of 59.56, there were still wide ranges of opinion between the experts. Variances ranged from 22.1 to 92.8.

MBA and Non-MBA Nurse Executives Compared to Experts

T-tests were completed to compare nurse executives' perceived ability with nurse experts' opinions on the importance of the various job aspects. Table 21 displays comparative means for the MP-JFI dimensions by nurse executives as a whole, MBA nurse executives, and non-MBA nurse executives. It also indicates the means for the nurse experts on the importance dimensions. Table 22 in the appendix represents the t-test data for all nurse executive respondents to the ability MP-JFI and the expert respondents to the importance MP-JFI. Table 23 has the t-test results of the MBA nurse executives and the expert nurses. Table 24 is a presentation of the t-test results comparing non-MBA nurse executive responses to the nurse expert responses.

The nurse executives' perceived ability differed significantly from what the nurse experts felt is important for the nurse executive position on some job dimensions. Table 6 summarizes the statistics and conclusions about differences between what nurse experts feel is important and how nurse executives rate their ability.

Table 6

Comparison of nurse executive ability scores and nurse expert importance scores based on independent samples t-tests

Dimension 1 (Setting Organizational Objectives)
Mean Difference= -13.57 t= -7.24 p= .136 significance= .000
Importance to executive job rated higher than perceived ability.

Dimension 2 (Financial Planning and Review)
Mean Difference= -2.57 t= -1.16 p= .064 significance= .249
No significant difference between importance and ability.

Dimension 3 (Improving Work Procedures and Practice)
Mean Difference= 1.23 t= .600 p= .213 significance= .549
No significant difference between importance and ability.

Dimension 4 (Interdepartmental Work Procedures)
Mean Difference= 3.23 t= 1.70 p= .539 significance= .093
No significant difference between importance and ability.

Dimension 5 (Developing Technical Ideas)
Mean Difference= -.260 t= -.140 p= .172 significance= .887
No significant difference between importance and ability.

Dimension 6 (Judgement)
Mean Difference= -1.22 t= -.580 p= .376 significance= .561
No significant difference between importance and ability.

Dimension 7 (Developing Group Cooperation)
Mean Difference= 4.20 t= 1.84 p= .110 significance= .070
No significant difference between importance and ability.

Dimension 8 (Coping with Emergencies)
Mean Difference= 10.83 t= 4.86 p= .008 significance= .000
Perceived ability rated higher than importance to job.

Dimension 9 (Promoting Safety)
Mean Difference= 2.69 t= 1.51 p= .373 significance= .134
No significant difference between importance and ability.

Dimension 10 (Communications)
Mean Difference= -6.77 t= -3.05 p= .128 significance= .003
Importance to executive job rated higher than perceived ability.

Dimension 11 (Developing Employee Potential)
Mean Difference= 3.29 t= 2.48 p= .514 significance= .015
Perceived ability rated higher than importance to job.

Dimension 12 (Supervisory Practices)
Mean Difference= 4.71 t= 4.94 p= .584 significance= .000
Perceived ability rated higher than importance to job.

Dimension 13 (Self-Development)
Mean Difference= 2.18 t= .128 p= .406 significance= .203
No significant difference between importance and ability.

Dimension 14 (Personnel Practices)
Mean Difference= -3.18 t= -1.7 p= .020 significance= .096
No significant difference between importance and ability.

Dimension 15 (Promoting Community Relations)
Mean Difference= -8.95 t= -5.77 p= .280 significance= .000
Importance to executive job rated higher than perceived ability.

Dimension 16 (Handling Outside Contacts)
Mean Difference= 5.30 t= 3.79 p= .867 significance= .000
Perceived ability rated higher than importance to job.

The experts see Dimension 1 (Setting Organizational Objectives), 10 (Communications), and 15 (Promoting Community-Organization Relations) as more important than the nurse executives rated their ability. The significance levels for their differences were .000 for Dimension 1, .002 for Dimension 10, and .000 for Dimension 15. The nurse executives expressed greater ability than the nurse experts felt was important in Dimensions 7 (Developing Group Cooperation and Teamwork), 8 (Coping with Difficulties and Emergencies), 11 (Developing Employee Potential), 12 (Supervisory Practices), and 16 (Handling Outside Contacts). The significance levels for their differences were .038 for Dimension 7, .000 for Dimension 8, .015 for Dimension 11, .000 for Dimension 12, and .000 for Dimension 16. The experts and executives had significant variances in what the experts felt was important and what the executives felt were their abilities in eight of the 16 dimensions.

The nurse executives with MBAs and nurse experts had significant variances in perceptions of ability and importance in five of the 16 dimensions. Table 7 summarizes the statistics and conclusions about the differences between how nurse experts rated dimensions, and nurse executives with MBAs rated their ability. Nurse experts rated Dimension 1 (Setting Organizational Objectives), and 14 (Personnel Practices) higher in importance than the executives rated their ability. The executives rated their ability to perform higher in dimensions 11, 12 and 16.

Table 7

Comparison of MBA nurse executive ability scores and nurse expert importance scores based on independent samples t-tests

Dimension 1 (Setting Organizational Objectives)
Mean Difference= -6.80 t= -2.98 p= .472 significance= .005
Importance to executive job rated higher than perceived ability.

Dimension 2 (Financial Planning and Review)
Mean Difference= 2.69 t= 1.02 p= .232 significance= .315
No significant difference between importance and ability.

Dimension 3 (Improving Work Procedures and Practice)
Mean Difference= -2.48 t= -.830 p= .057 significance= .410
No significant difference between importance and ability.

Dimension 4 (Interdepartmental Work Procedures)
Mean Difference= -.441 t= -.160 p= .344 significance= .877
No significant difference between importance and ability.

Dimension 5 (Developing Technical Ideas)
Mean Difference= -.120 t= -.050 p= .064 significance= .962
No significant difference between importance and ability.

Dimension 6 (Judgement)
Mean Difference= 3.85 t= 1.15 p= .545 significance= .255
No significant difference between importance and ability.

Dimension 7 (Developing Group Cooperation)
Mean Difference= 1.49 t= .490 p= .240 significance= .627
No significant difference between importance and ability.

Dimension 8 (Coping with Emergencies)
Mean Difference= 3.34 t= 1.03 p= .169 significance= .310
No significant difference between importance and ability.

Dimension 9 (Promoting Safety)
Mean Difference= -.038 t= -.01 p= .078 significance= .988
No significant difference between importance and ability.

Dimension 10 (Communications)
Mean Difference= -3.40 t= -1.17 p= .623 significance= .250
No significant difference between importance and ability.

Dimension 11 (Developing Employee Potential)
Mean Difference= 4.49 t= 2.40 p= .917 significance= .021
Perceived ability rated higher than importance to job.

Dimension 12 (Supervisory Practices)
Mean Difference= 3.99 t= 2.72 p= .384 significance= .010
Perceived ability rated higher than importance to job.

Dimension 13 (Self-Development)
Mean Difference= .679 t= .27 p= .443 significance= .787
No significant difference between importance and ability.

Dimension 14 (Personnel Practices)
Mean Difference= -5.00 t= -1.82 p= .057 significance= .076
No significant difference between importance and ability.

Dimension 15 (Promoting Community Relations)
Mean Difference= -3.19 t= -1.40 p= .197 significance= .169
No significant difference between importance and ability.

Dimension 16 (Handling Outside Contacts)
Mean Difference= 4.60 t= 2.22 p= .593 significance= .032
Perceived ability rated higher than importance to job.

The nurse executives without MBAs and the nurse experts had significant variances in perceptions of ability and importance in nine of the 16 dimensions. Table 8 summarizes the statistics and conclusions between these two groups. Nurse experts rated Dimensions 1 (Setting Organizational Objectives), 10 (Communications), and 16 (Promoting Community-Organization Relations) higher in importance than the nurse executives rated their ability. The nurse executives expressed greater ability than the nurse experts felt was important for Dimensions 4 (Interdepartmental Coordination), 7 (Developing Group Cooperation and Teamwork), 8 (Coping with Difficulties and Emergencies), 11 (Developing Employee Potential), 12 (Supervisory Practices), and 16 (Handling Outside Contacts).

MBA Nurse Executives Compared to Other Executives

Independent samples t-tests were completed to compare the MBA nurse executives with composite scores of both executive level and middle managers from a variety of industries. In the appendix, Table 25 shows how nurse executives with MBAs compared on the ability dimensions of the MP-JFI to what executives feel are the importance dimensions of the executive level position. Table 26 compares these nurse executives to what middle managers rated the dimension importance. The statistics for executives and middle managers who had previously completed the MP-JFI are located in Appendix G.

Table 8

Comparison of non-MBA nurse executive ability scores and nurse expert importance scores based on independent samples t-tests

Dimension 1 (Setting Organizational Objectives)
Mean Difference= -15.5 t= -8.10 p= .286 significance= .000
Importance to executive job rated higher than perceived ability.

Dimension 2 (Financial Planning and Review)
Mean Difference= -4.10 t= -1.79 p= .090 significance= .078
No significant difference between importance and ability.

Dimension 3 (Improving Work Procedures and Practice)
Mean Difference= 2.30 t= 1.15 p= .484 significance= .256
No significant difference between importance and ability.

Dimension 4 (Interdepartmental Work Procedures)
Mean Difference= 4.3 t= 2.14 p= .451 significance= .036
Perceived ability rated higher than importance to job.

Dimension 5 (Developing Technical Ideas)
Mean Difference= -.30 t= -.16 p= .313 significance= .874
No significant difference between importance and ability.

Dimension 6 (Judgement)
Mean Difference= -2.6 t= -1.3 p= .088 significance= .195
No significant difference between importance and ability.

Dimension 7 (Developing Group Cooperation)
Mean Difference= 4.98 t= 2.18 p= .106 significance= .032
Perceived ability rated higher than importance to job.

Dimension 8 (Coping with Emergencies)
Mean Difference= 13.0 t= 5.68 p= .048 significance= .000
Perceived ability rated higher than importance to job.

Dimension 9 (Promoting Safety)
Mean Difference= 3.47 t= 1.81 p= .577 significance= .075
No significant difference between importance and ability.

Dimension 10 (Communications)
Mean Difference= -7.74 t= -3.3 p= .103 significance= .002
Importance to executive job rated higher than perceived ability.

Dimension 11 (Developing Employee Potential)
Mean Difference= 2.94 t= 2.10 p= .505 significance= .039
Perceived ability rated higher than importance to job.

Dimension 12 (Supervisory Practices)
Mean Difference= 4.92 t= 4.81 p= .895 significance= .000
Perceived ability rated higher than importance to job.

Dimension 13 (Self-Development)
Mean Difference= 2.61 t= 1.43 p= .500 significance= .157
No significant difference between importance and ability.

Dimension 14 (Personnel Practices)
Mean Difference= -2.65 t= -1.36 p= .041 significance= .179
No significant difference between importance and ability.

Dimension 15 (Promoting Community Relations)
Mean Difference= -10.62 t= -7.37 p= .883 significance= .000
Importance to executive job rated higher than perceived ability.

Dimension 16 (Handling Outside Contacts)
Mean Difference= 5.50 t= 3.61 p= .967 significance= .001
Perceived ability rated higher than importance to job.

Nurse executives with MBAs in this research sample rated their ability on all but one of the 16 MP-JFI job dimensions in a manner not significantly different from how executives of a variety of industries rated the importance of the dimensions. The dimension with a significant difference was 15 (Promoting Community Relations). The executives from a variety of industries had a mean importance score of 56.0 for this dimension. The nurse executives with MBAs' mean ability score was 64.07. Nurse executives rated their ability to promote community relations significantly higher than multi-industry executives rated the importance of this skill to the executive role. Table 9 summarizes the statistics and conclusions about MBA nurse executive abilities compared to how executives rated dimensions on importance.

There was a significant difference between how nurse executives with MBAs rated their abilities and how multi-industry middle managers rated the importance of the dimension for two skills. Middle managers' mean score for the importance of Dimension 12 (Supervisory Practices) was 53. MBA nurse executives' mean ability score was 47.23. Multi-industry middle managers rated this dimension as more important to the middle management role than nurse executives rated their skill. The multi-industry middle managers rated Dimension 15 (Promoting Community-Organization Relations) at 56. The MBA nurse executives' ability score of 64.07 was significantly higher. Table 10 summarizes the statistics and conclusions about differences between MBA nurse executives and middle managers' scores.

Table 9

Comparison of MBA nurse executive ability scores and multi-industry CEO importance scores, independent samples t-tests

Dimension 1 (Setting Organizational Objectives)
Mean Difference= -.230 t= -.08 p= .139 significance= .940
No significant difference between importance and ability.

Dimension 2 (Financial Planning and Review)
Mean Difference= 2.42 t= .50 p= .06 significance= .624
No significant difference between importance and ability.

Dimension 3 (Improving Work Procedures and Practice)
Mean Difference= -2.88 t= -.87 p= .018 significance= .398
No significant difference between importance and ability.

Dimension 4 (Interdepartmental Work Procedures)
Mean Difference= -.307 t= -.08 p= .068 significance= .935
No significant difference between importance and ability.

Dimension 5 (Developing Technical Ideas)
Mean Difference= -2.90 t= -1.08 p= .009 significance= .297
No significant difference between importance and ability.

Dimension 6 (Judgement)
Mean Difference= -.326 t= -.10 p= .012 significance= .919
No significant difference between importance and ability.

Dimension 7 (Developing Group Cooperation)
Mean Difference= 1.42 t= .22 p= .124 significance= .829
No significant difference between importance and ability.

Dimension 8 (Coping with Emergencies)
Mean Difference= -2.17 t= -.63 p= .035 significance= .537
No significant difference between importance and ability.

Dimension 9 (Promoting Safety)
Mean Difference= .211 t= .07 p= .245 significance= .944
No significant difference between importance and ability.

Dimension 10 (Communications)
Mean Difference= -1.55 t= -.61 p= .028 significance= .550
No significant difference between importance and ability.

Dimension 11 (Developing Employee Potential)
Mean Difference= -.576 t= -.20 p= .155 significance= .847
No significant difference between importance and ability.

Dimension 12 (Supervisory Practices)
Mean Difference= -3.51 t= -1.78 p= .396 significance= .095
No significant difference between importance and ability.

Dimension 13 (Self-Development)
Mean Difference= .846 t= .13 p= .155 significance= .900
No significant difference between importance and ability.

Dimension 14 (Personnel Practices)
Mean Difference= -.519 t= -.17 p= .125 significance= .869
No significant difference between importance and ability.

Dimension 15 (Promoting Community Relations)
Mean Difference= 10.07 t= 2.38 p= .072 significance= .031
Ability is greater than executive importance.

Dimension 16 (Handling Outside Contacts)
Mean Difference= -1.69 t= -.65 p= .361 significance= .525
No significant difference between importance and ability.

Table 10

Comparison of MBA nurse executive ability scores, multi-industry mid-managers' importance scores, independent samples t-t

Dimension 1 (Setting Organizational Objectives)
Mean Difference= 5.26 t= 1.76 p= .106 significance= .099
No significant difference between importance and ability.

Dim
Mean Difference= 5.26 t= 1.76 p= .106 significance= .099
No significant difference between importance and ability.

Dimension 2 (Financial Planning and Review)
Mean Difference= 3.17 t= 1.08 p= .031 significance= .298
No significant difference between importance and ability.

Dimension 3 (Improving Work Procedures and Practice)
Mean Difference= -1.13 t= -.19 p= .065 significance= .851
No significant difference between importance and ability.

Dimension 4 (Interdepartmental Work Procedures)
Mean Difference= 1.44 t= .377 p= .446 significance= .716
No significant difference between importance and ability.

Dimension 5 (Developing Technical Ideas)
Mean Difference= -4.65 t= -1.63 p= .018 significance= .125
No significant difference between importance and ability.

Dimension 6 (Judgement)
Mean Difference= 1.177 t= .37 p= .012 significance= .715
No significant difference between importance and ability.

Dimension 7 (Developing Group Cooperation)
Mean Difference= -1.07 t= -.17 p= .194 significance= .871
No significant difference between importance and ability.

Dimension 8 (Coping with Emergencies)
Mean Difference= -4.67 t= -1.36 p= .035 significance= .195
No significant difference between importance and ability.

Dimension 9 (Promoting Safety)
Mean Difference= -2.28 t= -.76 p= .266 significance= .460
No significant difference between importance and ability.

Dimension 10 (Communications)
Mean Difference= -.81 t= -.31 p= .038 significance= .758
No significant difference between importance and ability.

Dimension 11 (Developing Employee Potential)
Mean Difference= -2.57 t= -.87 p= .20 significance= .400
No significant difference between importance and ability.

Dimension 12 (Supervisory Practices)
Mean Difference= -6.76 t= -3.26 p= .818 significance= .005
Importance to manager job rated higher than perceived ability.

Dimension 13 (Self-Development)
Mean Difference= -.903 t= -.43 p= .047 significance= .671
No significant difference between importance and ability.

Dimension 14 (Personnel Practices)
Mean Difference= -.769 t= -.25 p= .163 significance= .808
No significant difference between importance and ability.

Dimension 15 (Promoting Community Relations)
Mean Difference= 14.07 t= 3.32 p= .073 significance= .005
Ability rated higher than manager importance.

Dimension 16 (Handling Outside Contacts)
Mean Difference= -1.44 t= -.55 p= .483 significance= .592
No significant difference between importance and ability.

Non-MBA Nurse Executives Compared to Other Executives

Table 27 and Table 28 in the appendix display the results of t-tests performed to compare the non-MBA nurse executives' ability with executive and middle manager importance ratings on the MP-JFI. Nurse executives without MBAs differed significantly from multi-industry executives in six dimensions. These were Dimensions 1 (Setting Organizational Objectives), 4 (Interdepartmental Coordination), 6 (Judgement and Decision Making), 7 (Developing Group Cooperation and Teamwork), 8 (Coping with Difficulties and Emergencies), and 10 (Communications). These represent 38 percent of the compared dimensions. Multi-industry executives rated the importance of Dimensions 1, 6 and 10 for executives higher than the non-MBA nurse executives rated their ability. Non-MBA nurse executives rated their ability to perform Dimensions 4, 7, and 8 higher than the executives rated the importance of the dimensions. Table 11 summarizes statistics and conclusions about differences between non-MBA nurse abilities and multi-industry executive importance ratings.

The non-MBA nurse executives and multi-industry middle managers differed significantly in how they rated four dimensions. These were 8 (Coping with Difficulties and Emergencies), 10 (Communications), 12 (Supervisory Practices), and 15 (Promoting Community-Organization Practices).

Table 11

Comparison of non-MBA nurse executive ability and multi-industry CEO importance scores, independent samples t-tests

Dimension 1 (Setting Organizational Objectives)
Mean Difference= -8.90 t= -2.05 p= .065 significance= .046
Importance to executive job higher than perceived ability.

Dimension 2 (Financial Planning and Review)
Mean Difference= -4.36 t= -.78 p= .120 significance= .437
No significant difference between importance and ability.

Dimension 3 (Improving Work Procedures and Practice)
Mean Difference= 1.90 t= 1.15 p= .048 significance= .262
No significant difference between importance and ability.

Dimension 4 (Interdepartmental Work Procedures)
Mean Difference= 4.42 t= 1.07 p= .062 significance= .290
No significant difference between importance and ability.

Dimension 5 (Developing Technical Ideas)
Mean Difference= -3.08 t= -.70 p= .086 significance= .485
No significant difference between importance and ability.

Dimension 6 (Judgement)
Mean Difference= -6.87 t= -1.68 p= .072 significance= .099
No significant difference between importance and ability.

Dimension 7 (Developing Group Cooperation)
Mean Difference= 4.92 t= 2.87 p= .038 significance= .006
Ability rated higher than importance to executive job.

Dimension 8 (Coping with Emergencies)
Mean Difference= 7.48 t= 3.90 p= .008 significance= .001
Ability rated higher than importance to executive job.

Dimension 9 (Promoting Safety)
Mean Difference= 3.72 t= .92 p= .109 significance= .360
No significant difference between importance and ability.

Dimension 10 (Communications)
Mean Difference= -5.89 t= -3.35 p= .024 significance= .002
Importance to executive job higher than perceived ability.

Dimension 11 (Developing Employee Potential)
Mean Difference= -2.12 t= -.68 p= .108 significance= .500
No significant difference between importance and ability.

Dimension 12 (Supervisory Practices)
Mean Difference= -2.59 t= -1.25 p= .085 significance= .219
No significant difference between importance and ability.

Dimension 13 (Self-Development)
Mean Difference= 3.27 t= .85 p= .067 significance= .398
No significant difference between importance and ability.

Dimension 14 (Personnel Practices)
Mean Difference= 1.82 t= .52 p= .109 significance= .603
No significant difference between importance and ability.

Dimension 15 (Promoting Community Relations)
Mean Difference= 2.64 t= .86 p= .116 significance= .393
No significant difference between importance and ability.

Dimension 16 (Handling Outside Contacts)
Mean Difference= -.80 t= -.25 p= .386 significance= .803
No significant difference between importance and ability.

Table 12

Comparison of non-MBA nurse executive ability and mid-manager, multi-industry importance scores, independent samples t-tests

Dimension 1 (Setting Organizational Objectives)
Mean Difference= -3.40 t= -.78 p= .053 significance= .437
No significant difference between importance and ability.

Dimension 2 (Financial Planning and Review)
Mean Difference= -3.61 t= -.65 p= .078 significance= .519
No significant difference between importance and ability.

Dimension 3 (Improving Work Procedures and Practice)
Mean Difference= 3.65 t= .80 p= .186 significance= .429
No significant difference between importance and ability.

Dimension 4 (Interdepartmental Work Procedures)
Mean Difference= 6.17 t= 1.48 p= .357 significance= .146
No significant difference between importance and ability.

Dimension 5 (Developing Technical Ideas)
Mean Difference= -4.80 t= -1.10 p= .130 significance= .276
No significant difference between importance and ability.

Dimension 6 (Judgement)
Mean Difference= -5.38 t= -1.32 p= .072 significance= .195
No significant difference between importance and ability.

Dimension 7 (Developing Group Cooperation)
Mean Difference= 2.42 t= .430 p= .082 significance= .666
No significant difference between importance and ability.

Dimension 8 (Coping with Emergencies)
Mean Difference= 4.98 t= 2.60 p= .008 significance= .015
Ability rated higher than importance to executive job.

Dimension 9 (Promoting Safety)
Mean Difference= 1.22 t= .30 p= .111 significance= .763
No significant difference between importance and ability.

Dimension 10 (Communications)
Mean Difference= -5.14 t= -2.84 p= .031 significance= .008
Importance to manager job higher than perceived ability.

Dimension 11 (Developing Employee Potential)
Mean Difference= -4.12 t= -1.32 p= .139 significance= .194
No significant difference between importance and ability.

Dimension 12 (Supervisory Practices)
Mean Difference= -5.80 t= -2.77 p= .324 significance= .008
Importance to manager job higher than perceived ability.

Dimension 13 (Self-Development)
Mean Difference= 1.02 t= .27 p= .133 significance= .791
No significant difference between importance and ability.

Dimension 14 (Personnel Practices)
Mean Difference= 1.57 t= .45 p= .136 significance= .654
No significant difference between importance and ability.

Dimension 15 (Promoting Community Relations)
Mean Difference= 6.64 t= 2.17 p= .117 significance= .035
Ability rated higher than importance to executive job.

Dimension 16 (Handling Outside Contacts)
Mean Difference= -.55 t= -.17 p= .456 significance= .864
No significant difference between importance and ability.

The nurse executives felt their skills were higher in coping with emergencies and promoting community relations than the middle managers felt these were important to middle management jobs. The middle managers rated communications and supervisory practices as more important than the nurse executives rated their ability. They differed significantly in 21 percent of the dimensions. Table 12 summarizes these differences.

Summary of Presentation of Findings

The samples of nurse executives, nurse executives with MBAs, and nurse executives without MBAs in this research had wide ranges and variability in how respondents rated their ability to perform the dimensions of the MP-JFI. There was less variability in how the nurse experts rated the dimensions for importance.

The executives with MBAs differed significantly from the non-MBAs for four dimensions. These were Dimensions 1 (Setting Organizational Objectives), 2 (Financial Planning and Review), 8 (Coping with Difficulties and Emergencies), and 15 (Promoting Community-Organization Relations). The MBAs scored higher on Dimensions 1, 2, and 15. Dimension 2 was repeatedly mentioned in the literature as especially important for nurse executive effectiveness. Dimensions 1, 8, and 15 were also cited as responsibilities of nurse executives. ANOVA tests indicated that the MBA and non-MBA

groups did not differ significantly in their time as nurse executives nor tenure in current positions. If time either as nurse executives or in present position effected how dimensions were rated, this effect was the same on both groups, so differences cannot be attributed to years of experience.

The MBA nurse executives' composite answers for their ability to perform the 16 dimensions were more similar to what the experts felt were important to the executive nursing job than the non-MBA nurse executives. The MBA executives had significant variances in their perceived ability from the experts' importance rating in five dimensions. The non-MBAs had significant differences from the experts in nine dimensions.

Of the dimensions on which the MBAs and experts differed, Dimensions 11 (Developing Employee Potential), and 12 (Supervisory Practices) were listed in the literature as important to nurse executive effectiveness. Both were rated by the executives higher for their ability than the experts rated their importance.

Of the dimensions on which the non-MBAs and experts differed, Dimensions 10 (Communications), 4 (Interdepartmental Coordination), 7 (Developing Group Cooperation and Teamwork), 11 (Developing Employee Potential), and 12 (Supervisory Practices) were specifically mentioned in the Nursing Literature as essential to executive effectiveness.

Dimension 10 was rated higher in importance by the experts, while Dimensions 4, 7, 11, and 12 were rated higher in ability by the executives.

When the MBA nurse executives' rated abilities were compared to what executives from a variety of industries feel is important for managers at the executive level, a significant difference was found in Dimension 15 (Promoting Community-Organization Relations). The MBA nurse executives rated their skill in this area higher than executives rated its importance.

MBA nurse executives rated their abilities significantly different from how multi-industry middle managers rated importance on two dimensions. Middle managers felt that Dimension 12 (Supervisory Practices) was more important than MBA nurse executives rated their ability. Nurse executives with MBAs rated their ability on Dimension 15 (Promoting Community-Organization Relations) higher than middle managers rated its importance.

Non-MBA nurse executives' ability ratings differed significantly from multi-industry executive importance ratings in six dimensions. These were Dimensions 1 (Setting Organizational Objectives), 4 (Interdepartmental Coordination), 6 (Judgement and Decision Making), 7 (Developing Group Cooperation and Teamwork), 8 (Coping with Difficulties and Emergencies), and 10 (Communications).

The non-MBAs' ability rating differed from the importance ratings of the multi-industry middle managers for four dimensions. The two rated higher by the non-MBA nurse executives were Dimensions 8 (Coping with Difficulties and Emergencies) and 15 (Promoting Community-Organization Relations). Dimension 10 (Communications) and Dimension 12 (Supervisory Practices) were rated higher by the multi-industry middle managers. The nurse executives who do not have MBAs more closely resembled the middle manager importance ratings than the executive importance ratings in multiple industries, significantly differing in only four versus six dimensions.

Chapter five summarizes the research, the research findings, and the conclusions. The hypotheses testing results are addressed along with suggestions for future research in this area.

CHAPTER V

SUMMARY AND CONCLUSIONS

The appropriate education for management positions has been a subject of long standing debate. In professionally dominated organizations such as hospitals, executives frequently have been promoted from the professional ranks. These professionals may have obtained graduate education in their professional field or generalist management degrees to complement their specialist education.

This dissertation research addressed one group of professional top managers, nurse executives. Nursing literature documents the argument about what the appropriate education is for these Nursing leaders. Some suggest the need for the generalist MBA degree because of the essential skill of understanding the business side of hospitals. Others insist that the appropriate education for nurse executives must be obtained in the School of Nursing, perhaps with enough business curricula to grant the Nursing management student a minor in Business or a combined MSN/MBA degree.

Wherever the skills are obtained, Hospital, Nursing, and Management literature documents certain abilities needed by the executive level nurse. These include the business skills of budget, finance, resource management, planning, systems

analysis, and personnel management. Nurse executives are expected to have good negotiation and communication skills, strong value systems, organizational view, and the ability to serve as change agents, people developers and image setters.

This research was based on an interest in management skills needed by service industry managers of the future. It was concerned with the best educational background to prepare executives with these skills and how the managers in the healthcare service industry compare to managers in other industries.

Management skills needed by service industry managers of the future were explored through the literature search referenced above and the administration of the Managerial and Professional Job Functions Inventory (MP-JFI) to 28 nursing administration experts. The experts, all Fellows of the American Academy of Nursing or national officers in the American Organization of Nurse Executives, completed the MP-JFI by rating 140 items describing 16 job dimensions based on the importance of the item to the nurse executive position of the next ten years. Table 13 is a composite of the order in which the dimensions were rated from most important to least important for nurse executives of the future. The most important was "Setting Organizational Objectives" while the least important was "Coping With Difficulties and Emergencies." It was noted that there was a great deal of variability in how the experts rated the dimensions. There was a range from 35.7 to 69.6 in the composite means.

Table 13.

Experts' Composite Rating of MP-JFI Dimensions
In Order of Importance for Nurse Executives

1. Setting Organizational Objectives
2. Promoting Community-Organization Relations
3. Communications
4. Personnel Practices
5. Financial Planning and Review
6. Interdepartmental Co-ordination
7. Improving Work Procedures and Practices
8. Developing Group Cooperation and Teamwork
9. Judgement and Decision Making
10. Developing Employee Potential
11. Self-Development and Improvement
12. Handling Outside Contacts
13. Promoting Safety Attitudes and Practices
14. Supervisory Practices
15. Developing and Implementing Technical Ideas
16. Coping with Difficulties and Emergencies

The best educational background to prepare executives with these skills was examined by comparing nurse executives with MBAs to nurse executives without formal business education. Fifty-eight nurse executives, of which 13 had MBA degrees or combination MSN/MBA degrees, completed the MP-JFI based on their perceived ability to perform the inventory functions. The composite scores of the nurse executives, the nurse executives with MBAs, and the nurse executives without MBAs were then compared to the importance scores of the nurse experts. The entire nurse executive group differed significantly from the nurse experts in eight of the job dimensions. That is, nurse experts rated the importance

of half of the sixteen dimensions significantly differently from how the nurse executives rated their ability. When divided by education (MBA, Non-MBA), the thirteen nurse executives with MBAs differed significantly in perceived ability from what the nurse experts rated as important in only five of the dimensions. Nurse executives without MBAs rated their ability significantly different from the experts' rating of importance in nine of the dimensions.

To compare nurse executives' perceived ability to what managers in other industries feel is important to their jobs, the nurse executives with MBAs and the nurse executives without MBAs were compared to composite profiles of executives and middle managers from a variety of industries who previously completed the Importance MP-JFI. The nurse executives with MBAs' ability scores differed from the other executives' importance scores in only one dimension. They differed from middle managers in two dimensions. The nurse executives without MBAs' ability scores differed from the other executives' importance scores in six dimensions and from middle managers in four dimensions. Figures 4 and 5 illustrate the normal standard scores for each dimension for experts, nurse executives with MBAs, nurse executives without MBAs, executives from multiple industries, and middle-managers from multiple industries. The normal standard scores are the means for each group. As the tables in Appendix H show, there were different levels of variation between samples and dimensions.

Figure 4

Normalized Standard Scores, Dimensions 1-8, Experts (X), Nurse Executive MBAs (A), Nurse Executive non-MBAs (N), Multi-Industry Execs (E), Multi-Industry Mid-Managers (M)

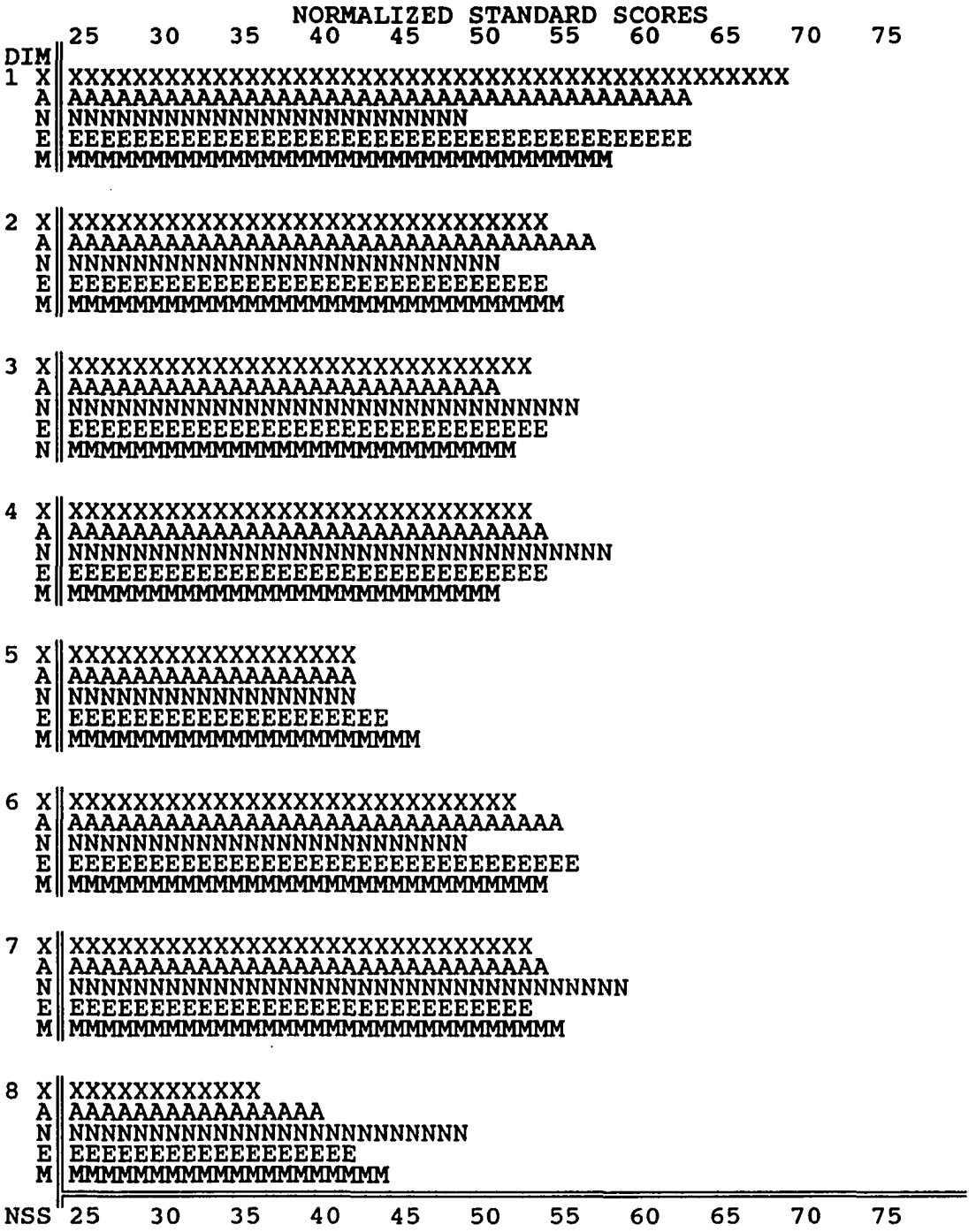
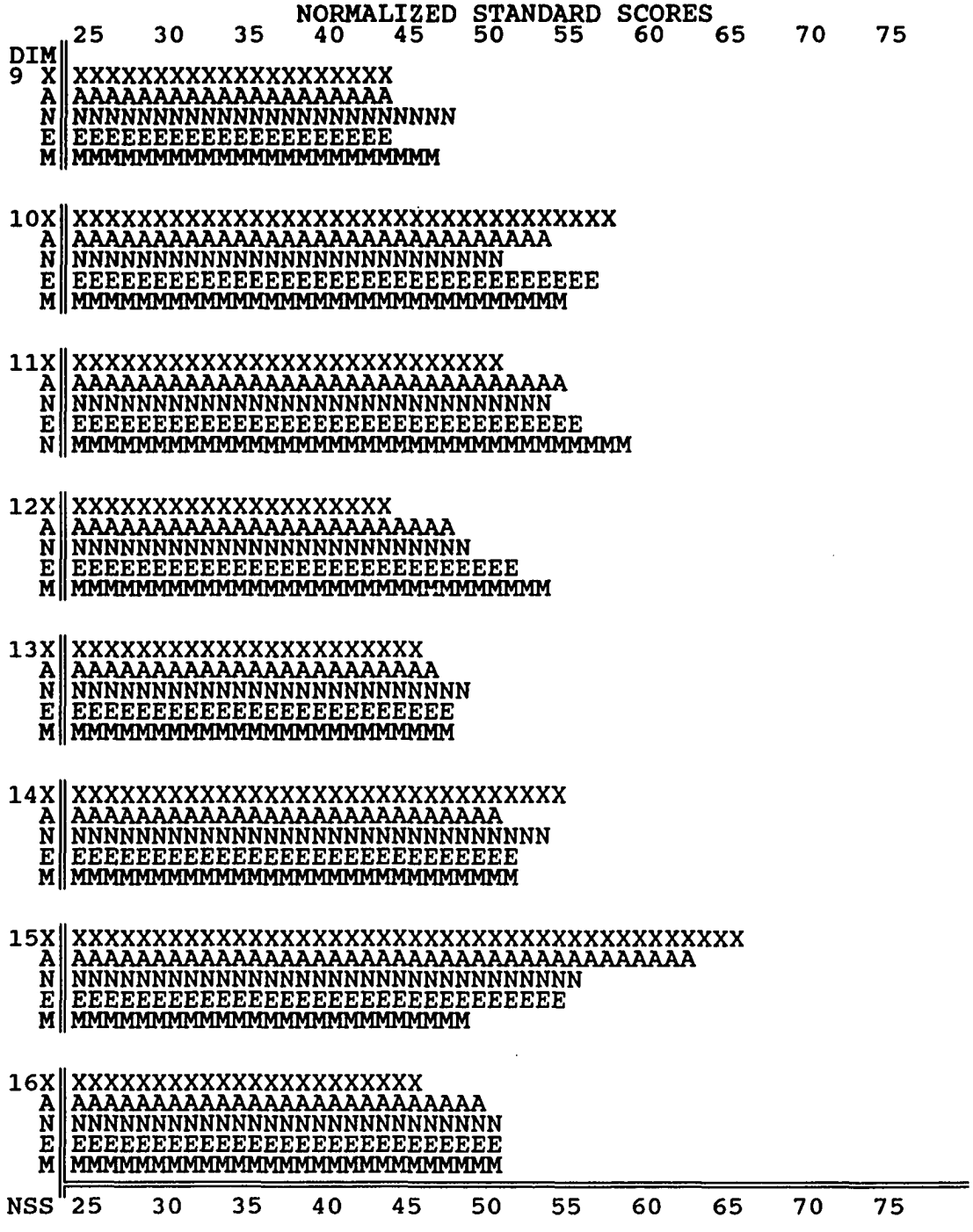


Figure 5

Normalized Standard Scores, Dimensions 9-16, Experts (X), Nurse Executive MBAs (A), Nurse Executive non-MBAs (N), Multi-Industry Executives (E), Multi-Industry Mid-Managers(M)



Results of Hypotheses Testing

There were two research hypotheses for this study:

RH1. Nurse executives with MBAs perceive their management abilities to be more closely resembling what nursing experts feel is needed for nurse executives of the future than nurse executives with no formal business education perceive their abilities.
RH2. Ability self-perceptions of nurse executives with MBAs resemble the MP-JFI occupational profile of executives while the ability self-perceptions of nurse executives with no formal business education resembles the occupational profile of middle managers.

The explanatory hypotheses and their null and alternative forms derived from Research Hypothesis One included the following.

H1: The self perceived management abilities of nurse executives with MBAs differ from the self perceived management abilities of nurse executives with no MBA.
H1o: There is no difference between the self perceived management abilities of nurse executives with MBAs and nurse executives without MBAs
H1a: There is a difference between the self perceived management abilities of nurse executives with MBAs and nurse executives without MBAs.
H2: Nurse executives with MBAs perceive their management abilities to resemble what nurse experts feel is needed for nurse executives of the next ten years.
H2a: There is no difference between the self perceived management abilities of nurse executives with MBAs and the abilities which nurse experts feel are needed by nurse executives of the next ten years.
H2o: There is a difference between the self perceived management abilities of nurse executives with MBAs and the abilities which nurse experts feel are needed by nurse executives of the next ten years.
H3: The self perceived management abilities of non-MBA nurse executives differ from what nurse experts feel is needed for nurse executives of the next ten years.
H3o: There is no difference between the self perceived management abilities of nurse executives without MBAs and the abilities which nurse experts feel are needed by nurse executives of the next ten years.
H3a: There is a difference between the self perceived management abilities of nurse executives without MBAs and the abilities which nurse experts feel are needed by nurse executives of the next ten years.

Table 14 shows how each hypothesis was addressed and conclusions drawn from the research results. The significance level for all statistical studies was .05.

Table 14.

Hypotheses Testing and Conclusions, H1, H2, H3

Hypothesis Number:	Test Performed: t-test means of	# of Dimensions W/ Significant Differences:	% of Dimensions W/ Significant Differences:
H1	MBA/NonMBA Nrs Execs	4	25

Conclusion: There is a difference between self-perceived management abilities of nurse executives with MBAs and nurse executives without MBAs for 25 percent of dimensions. Null hypothesis is rejected.

Hypothesis Number:	Test Performed: t-test means of	# of Dimensions W/ Significant Differences:	% of Dimensions W/ Significant Differences:
H2	MBA Nrs Execs/ Nrs Experts	5	31

Conclusion: There is a difference between self-perceived abilities of nurse executives with MBAs and what nurse experts feel is important in the executive job for 31 percent of the dimensions. The null hypothesis cannot be rejected.

Hypothesis Number:	Test Performed: t-test means	# of Dimensions W/ Significant Differences:	% of Dimensions W/ Significant Differences:
H3	Non-MBA/ Nrs Experts	9	56

Conclusion: There is a difference between self-perceived abilities of nurse executives without MBAs and what nurse experts feel is important in the executive job for 56 percent of the dimensions. The null hypothesis is rejected.

Nrs = Nurse Non-MBA = Nurse Executive without MBA
Nrs Execs = Nurse Executives Nrs Experts = Nurse Experts

Research Hypothesis One was addressed by comparing the relative difference between composite MP-JFI ability profiles of nurse executives with MBAs and nurse executives without MBAs to the composite MP-JFI importance profile of the nurse experts. The nurse executives with MBAs differed significantly from the nurse experts' importance rating in five dimensions. Nurse executives without MBAs differed significantly from the nurse experts' importance rating in nine dimensions. Therefore, the MBA nurse executive ability profile more closely resembled the nurse expert importance profile than the non-MBA nurse executive Ability profile.

The explanatory hypotheses and their null and alternate forms derived from Research Hypothesis Two follow.

H4: The self perceived management abilities of nurse executives with MBAs closely resembles the MP-JFI occupational profile of various industry executives.
H4a: There is no difference between the self perceived management abilities of nurse executives with MBAs and the MP-JFI occupational profile of various industry executives.
H4o: There is a difference between the self perceived management abilities of nurse executives with MBAs and the MP-JFI occupational profile of various industry executives.
H5: The self perceived management abilities of non-MBA nurse executives resembles the MP-JFI occupational profile of middle managers.
H5a: There is no difference between the self perceived management abilities of nurse executives without MBAs and the MP-JFI occupational profile of various industry middle managers.
H5o: There is a difference between the self perceived management abilities of nurse executives without MBAs and the MP-JFI occupational profile of various industry middle managers.

Table 15 shows how hypotheses 4 and 5 were addressed and conclusions drawn from the research. The significance level for all statistical studies was .05.

Table 15.

Hypotheses Testing and Conclusions, H4, H5

Hypothesis Number:	Test Performed: t-test means of	# of Dimensions W/ Significant Differences:	% of Dimensions W/ Significant Differences:
H4	MBA/Multi Ind. Execs	1	6.2

Conclusion: Nurse executives with MBAs differed significantly on their ability scores from multi-industry executives' importance scores in only one dimension. The null hypothesis cannot be rejected. However, hypothesis four appears to be correct as stated: nurse executives with MBAs closely resemble the MP-JFI occupational profile of various industry executives.

Hypothesis Number:	Test Performed: t-test means of	# of Dimensions W/ Significant Differences:	% of Dimensions W/ Significant Differences:
H5	NonMBA/Multi Ind. Mid-Mgrs	4	25

Conclusion: There is a difference between self-perceived management abilities of nurse executives without MBAs and multi-industry middle managers for 25 percent of dimensions. The null hypothesis cannot be rejected.

NonMBA = Nurse Executives without MBAs
Multi Ind. Execs = Multi-Industry Executives
Multi Ind. Mid-Mgrs = Multi-Industry Middle Managers
MBA = Nurse Executives with MBAs

To more thoroughly test Research Hypothesis Two, the nurse executives with MBAs were compared to middle managers from a variety of industries and the non-MBA nurse executives were compared to the multi-industry executives. The MBA nurse executives differed from multi-industry middle managers in two dimensions. The Non-MBA nurse executives differed from the multi-industry executives in six dimensions. The nurse executives with MBAs did resemble the multi-industry

executives more closely than the non-MBA nurse executives. However, the non-MBAs did not resemble the middle managers more closely than the MBA nurse executives, so the hypothesis could not be shown to be completely correct.

The hypothesis testing supported the truth of Research Hypothesis One. It supported part of Research Hypothesis Two, as explained further in the Conclusions section of this chapter.

Conclusions

The nurse experts from the sample in this research rated 16 job dimensions as to the importance of these skills to the position of nurse executive for the next ten years. Nurse executives rated these same dimensions by their current ability to perform them. The executives' current skill does not match the experts' importance rating for 50 percent of the skills. According to these findings, nurse executives' skills do not match what the experts feel will be needed. However, nurse executives with MBAs more closely match what the experts say is needed than the nurse executives who do not have formal graduate business degrees. If the experts and literature in the field of Nursing Administration are valid indicators of the skills needed by nurse executives of the future, nurse executives with MBAs are better prepared than nurse executives without MBAs to provide these skills to hospital leadership teams.

Nurse executives with MBAs closely fit the profile of what executives from varied industries say is needed in the

executive role. According to research conducted with the MP-JFI, studies have confirmed that top level managers perform similar functions regardless of the functional hierarchy through which they have risen. (MP-JFI Interpretation and Research Manual, 1986). In this research project, nurse executives with MBAs fit the executive profile. Nurse executives without MBAs did not fit the executive profile. Nurse executives with MBAs more closely resembled executives than middle managers. The one area in which MBA nurse executives significantly differed from other executives, promoting community-organization relations, may be a peculiar skill perceived to be more essential for hospitals than other businesses. The middle managers in other industries did not rate this skill as highly important either, while nurse experts rated it as the second most important dimension of the nurse executive role and all nurse executives (MBA and non-MBA) rated it high.

Not only did the MBA nurse executives fit the executive profile, they resembled the multi-industry middle managers more closely than the non-MBA nurse executives. Having an MBA appears to cause nurse executives to rate their skills more like managers in other businesses.

Hospitals are service industries. They have evolved into businesses over time. The appropriate education for managers of professional workers, including nurses, has been argued on an emotional level. The findings of this research show that experts in the Nursing field agree with the literature about necessary future skills of nurse executives. Business

education appears to provide a better background for these skills than other management preparation. Business education appears to be better preparation for executives managing professionals than professional (specialized) education. Practice can only be improved by education if the education is needed and relevant for management practice. The MBA, according to this research, is relevant and provides needed skill education.

Suggestions for Further Research

This dissertation was limited to research in one service industry and one type of professional hierarchy executive. The arguments in academic and professional circles about the appropriate education of managers will continue to be based on personal intuition or conjecture until there is more research that shows differences between different types of preparation of managers. Similar studies among other professionals who have been promoted into management and executive roles would add to management education theory.

This research was limited to self perceptions about skill levels. Follow up studies should be undertaken to compare what skills the experts feel are needed to actual skill tests taken by managers with varied backgrounds and education. The field of management can be improved only if management theory is expanded and appropriate education is provided for management practitioners.

APPENDIX A

LETTERS

11707 Carriage Place
Olalla, Wa. 98359
31 January, 1991

London House
1550 Northwest Highway
Park Ridge, Illinois 60068

Dear Sirs,

I am interested in using your copyrighted human resource tool, the Managerial and Professional Job Functions Inventory, to gather data for my Nova University dissertation in the area of nurse executive's management abilities. I am familiar with the MP-JFI because I have previously ordered materials from London House through my job.

I would purchase all of the MP-JFIs and score sheets directly from you, and of course no part of the booklet or score sheet would be copied or reproduced. I would hand score the tests myself and do not plan to use your scoring or profiling service for this particular project.

May I have your permission to use the MP-JFIs I purchase from you as part of my Doctoral dissertation research?

Thank you,

Kathleen D. Sanford

11707 Carriage Place
Olalla, Wa. 98359
DATE

XXXXXXXXXXXXX
XXXXXXXXXXXXX
XXXXXXXXXXXXX
XXXXXXXXXXXXX

Dear XXXXXXXX

I am a doctoral candidate writing to ask for your help in the research portion of my dissertation. I am researching the skills that will be needed by nurse executives in acute care hospitals during the next ten years. One phase of my research involves asking recognized leaders in our profession what they see as the most important functions of the Chief Nursing Executive position in the 1990s.

As a fellow in the American Academy of Nursing, you have been recognized as a national Nursing leader. Would you be willing to fill out the Managerial and Professional Job Functions Inventory? It would take a minimum of 30 minutes (and I know your time is limited) and it is a moderately complicated tool, but your participation would be invaluable to my research.

If you can help, please return the enclosed post card. If you would like to talk to me about the research, my home phone number is 206-876-1952 and my hospital work number is 206-377-3911, ext. 2502. If you are interested, I would be pleased to send you my survey results.

Sincerely,

Kathleen Sanford MA,MBA,RN

11707 Carriage Place
Olalla, Wa. 98359
December 9, 1991

title *first name* *last name*
position
company
address
city *state* *zip*

Dear *comment 1*

I am a doctoral candidate writing to ask for your help in the research portion of my dissertation. I am researching the skills that will be needed by nurse executives in acute care hospitals during the next ten years. One phase of my research involves asking nurse executives to complete a job inventory on which they rate their self perceived abilities.

Would you be willing to fill out the Managerial and Professional Job Functions Inventory? It would take a minimum of 30 minutes (and I know your time is limited) and it is a moderately complicated tool, but your participation would be invaluable to my research. Your name would not appear on the inventory, so your answers would be anonymous.

If you can help, please return the enclosed post card. If you would like to talk to me about the research, my home phone number is 206-876-1952 and my hospital work number is 206-792-6702. If you are interested, I would be pleased to send you my survey results.

Sincerely,

Kathleen Sanford MA,MBA,RN

APPENDIX B

MANAGERIAL AND PROFESSIONAL JOB FUNCTIONS INVENTORY, IMPORTANCE RATING

Managerial and Professional Job Functions Inventory *Importance Rating*

University Series

London House
Leaders in Human Resource Assessment

A Macmillan/McGraw-Hill Company

Developed by:
Melany E. Baehr, Ph.D.,
Wallace G. Lonergan, Ph.D.
and Bruce A. Hunt
Human Resources Center,
The University of Chicago

50-102011

Please Fill In

Name _____

Your Occupation _____

Company _____

Job Being Rated _____

Date _____

Instructions

The *Managerial and Professional Job Functions Inventory* provides a standardized and quantitative procedure for defining the basic dimensions of jobs and assessing their relative importance for each job. The *Inventory* consists of 140 items or functions which could be performed in a wide variety of jobs.

To complete this *Inventory*, rate the importance of each item or function for the particular job in question. In deciding on the importance of each item or function for the target job, think of the job the way it *is, not* the way you would like it to be or the way other people expect it to be.

Use a No. 2 *pencil*, not a pen. First, fill in the information asked for at the top of this page. Then there are two steps to follow in rating the importance of booklet items for the job.

Managerial and Professional Job Functions Inventory – MPJFI

London House
1550 Northwest Highway
Park Ridge, Illinois 60068
A Macmillan/McGraw-Hill Company

1 2 3 4 5 6 7 8 9 10

Reprinted 9/90

General Instructions

Step One

1. Read each item. Decide whether you think it is of "*Below Average*" or "*Above Average*" importance for the target job. Indicate your decision with a check mark in the appropriate one of the two middle shaded columns on the right of the page.
2. Please rate about *half* the items "Below" and *half* "Above" for the booklet as a whole, or approximately 14 "Below" and 14 "Above" on each full page. When you have rated all 140 items, count the total of "Below Average" marks for the *whole* booklet. If you have 60 or less, review your ratings and reclassify more items as "Below Average." If you have 80 or more, please classify more items as "Above Average." Erase your original check mark when you make a change.

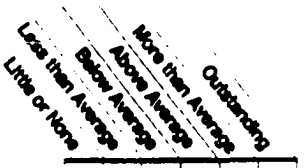
Step Two

1. On each page, look at the items you have rated "Below Average." Now make more precise ratings. Use the *unshaded* columns labeled "Little or None" and "Less than Average." For each item, make a new rating in one of these columns. Again please classify about *half* of the items you are dealing with into each column, or approximately 7 "Little or None" and 7 "Less than Average" on each full page.
2. Do the same on each page for the items you checked "Above Average." Make a more precise rating on each, using the *unshaded* columns labeled "More than Average" and "Outstanding." For each item, make a new rating in one of these columns. Please classify about *half* of the items you are dealing with into each column, or approximately 7 "More than Average" and 7 "Outstanding" on each full page.
3. Remember that the recommended approximate number of items per column are only guidelines to help you achieve the main objective of sorting the total number of items in the booklet into four categories of approximately equal numbers.

Inventory Items

	Little or None	Less than Average	Below Average	Above Average	More than Average	Outstanding	
1. Timing major actions to take advantage of the changing factors affecting the organization							
2. Making decisions on the basis of the organization's economic situation							
3. Interpreting policies and rules of the organization to others							
4. Knowing where to obtain information about the different operations in the organization							
5. Translating an idea into a technically operational design							
6. Analyzing information needed to make decisions							
7. Leading the way in building cooperative relationships within the work group							a
8. Coping with unexpected work and production problems							
9. Promoting constructive attitudes toward on-the-job safety and health							
10. Establishing effective processes for internal and external communication							
11. Creating opportunities for subordinates to improve their performance							
12. Enforcing the regulations of the organization							
13. Assessing one's own strengths and weaknesses with a view to improvement							b
14. Staying informed about federal and state requirements on equal opportunity hiring							
15. Obtaining information regarding available community resources							
16. Conveying a feeling of special attention and privilege to longstanding clients, customers or suppliers							
17. Predicting future trends on the basis of presently available information							
18. Maintaining accurate and efficient financial records							c
19. Evaluating the effectiveness of organization structure for implementing procedural innovations							
20. Understanding the problems of other work groups and departments							
21. Preparing clear, well-organized technical reports							
22. Taking action based on information or judgments received from others							
23. Being alert to the level of morale in the work group							
24. Recognizing priorities for action in emergencies							
25. Identifying and eliminating safety and health hazards in the work place							d
26. Keeping communication channels open both upward and downward in the organization							
27. Rewarding good work appropriately							
28. Knowing how to motivate different kinds of employees for better performance							
Approximate Final Column Totals	7	7	14	14	7	7	

Inventory Items



29. Systematically formulating goals for self-improvement
30. Helping to integrate members of minority groups into the work force
31. Staying informed on the social, economic and political problems of the community
32. Meeting with service agents, suppliers or clients on a periodic follow-up basis
33. Setting objectives for the organization that are significant, attainable and measurable
34. Establishing a budget for the work of one's own group
35. Reviewing the organization's operations in order to initiate needed improvement
36. Coordinating relationships between groups
37. Originating technical ideas and designs
38. Being flexible in approaching non-routine decisions
39. Building a sense of pride and purpose in the work group
40. Working efficiently under pressure
41. Seeing that work schedules are compatible with safety
42. Identifying possible barriers to communication within the organization
43. Reassigning individuals for better utilization of their abilities
44. Making the responsibilities of the job clear to others
45. Actively expanding the scope and responsibilities of one's own job
46. Ensuring that members of the organization adhere to federal guidelines on employee selection procedures
47. Accepting responsibility for the impact of organizational decisions on the local economy
48. Making arrangements for the proper handling of important visitors
49. Getting agreement on challenging objectives that will take several years to achieve
50. Establishing independent controls according to current auditing practices
51. Analyzing operating policies to determine their relevance to the current work situation
52. Recognizing and utilizing the informal communication networks in the organization
53. Translating technological advances into practical uses
54. Accepting responsibility for the effects of decisions made by subordinates
55. Fostering the attitude that the group must solve many of its own problems
56. Handling dangerous or emergency situations

Approximate Final Column Totals	7	7	14	14	7	7

APPENDIX C

MANAGERIAL AND PROFESSIONAL JOB FUNCTIONS INVENTORY, ABILITY

[redacted]

[redacted]

[redacted]

Managerial and Professional Job Functions Inventory

Ability

University Series

London House

Leaders in
Human Resource
Assessment

50-102010

Please Fill In

Name _____

Occupation _____

Company _____

Date _____

Directions

The *Managerial and Professional Job Functions Inventory* provides a standardized and quantitative procedure for defining the basic dimensions of jobs and assessing one's ability to perform them. The *Inventory* consists of 140 items or descriptions of functions which may be performed in a wide variety of jobs.

To complete this *Inventory*, rate your general ability to perform each of these functions. In making your judgments, rate your abilities the way they *are, not* the way you would like them to be.

Use a *No. 2 pencil*, not a pen. First, fill in the information asked for at the top of this page. Then turn to *page 2* of the booklet.

London House
1550 Northwest Highway
Park Ridge, IL 60068

2 3 4 5 6 7 8 9 10

Reprinted 5/90

General Instructions

Step One

1. Read each item. Decide whether your general ability to perform that function is "*Below Average*" or "*Above Average*" as compared with your ability to do other functions you can perform. Indicate your judgment with a check mark in the appropriate one of the two middle *shaded* columns on the right of the page.

2. Rate about half of the items "*Below Average*" and half "*Above Average*" for the booklet as a whole. The result should be approximately 12 "*Below Average*" and 12 "*Above Average*" check marks on each full page. When you have rated all 140 items, count the total of "*Below Average*" marks for the *whole* booklet. If you have 60 or less, review your ratings and reclassify more items as "*Below Average.*" If you have 80 or more, classify more items as "*Above Average.*" Erase your original check mark when you make a change. Make sure you rate no more than 80 items "*Above Average.*" Failure to do this will invalidate your results.

Step Two

1. On each page, look at the items you have rated "*Below Average.*" Now make more precise ratings. Use the *unshaded* columns labeled "*Little or None*" and "*Less than Average.*" For each item, make a new rating in one of these columns. Again try to classify about *half* of the items you are dealing with into each column, or approximately 6 "*Little or None*" and 6 "*Less than Average*" responses on each full page.

2. Do the same on each page for the items you checked "*Above Average.*" Make a more precise rating on each, using the *unshaded* columns labeled "*More than Average*" and "*Outstanding.*" For each item, make a new rating in one of these columns. Try to classify about *half* of the items you are dealing with into each column, or approximately 6 "*More than Average*" and 6 "*Outstanding*" responses on each full page.

3. Remember that the recommended approximate number of items per column is only a guideline to help you achieve the main objective of sorting the total number of items in the booklet into four categories of approximately equal numbers.

Inventory Items

	Little or None	Less than Average	Below Average	Above Average	More than Average	Outstanding
1. Timing major actions to take advantage of the changing factors affecting the organization						
2. Making decisions on the basis of the organization's economic situation						
3. Interpreting policies and rules of the organization to others						
4. Knowing where to obtain information about the different operations in the organization						
5. Translating an idea into a technically operational design						
6. Analyzing information needed to make decisions						

001 002 003 004 005 006

A

7. Leading the way in building cooperative relationships within the work group						
8. Coping with unexpected work and production problems						
9. Promoting constructive attitudes toward on-the-job safety and health						
10. Establishing effective processes for internal and external communication						
11. Creating opportunities for subordinates to improve their performance						
12. Enforcing the regulations of the organization						

007 008 009 010 011 012

B

13. Assessing one's own strengths and weaknesses with a view to improvement						
14. Staying informed about federal and state requirements on equal opportunity hiring						
15. Obtaining information regarding available community resources						
16. Conveying a feeling of special attention and privilege to longstanding clients, customers, or suppliers						
17. Predicting future trends on the basis of presently available information						
18. Maintaining accurate and efficient financial records						

013 014 015 016 017 018

C

19. Evaluating the effectiveness of organization structure for implementing procedural innovations						
20. Understanding the problems of other work groups and departments						
21. Preparing clear, well-organized technical reports						
22. Taking action based on information or judgments received from others						
23. Being alert to the level of morale in the work group						
24. Recognizing priorities for action in emergencies						

019 020 021 022 023 024

D

Approximate Final Column Totals	**6**	**6**	**12**	**12**	**6**	**6**

Inventory Items

	Little or None	Less than Average	Below Average	Above Average	More than Average	Outstanding
25. Identifying and eliminating safety and health hazards in the work place						
26. Keeping communication channels open both upward and downward in the organization						
27. Rewarding good work appropriately						
28. Knowing how to motivate different kinds of employees for better performance						
29. Systematically formulating goals for self-improvement						
30. Helping to integrate members of minority groups into the work force						
025 026 027 028 029 030 **E**						
31. Staying informed on the social, economic, and political problems of the community						
32. Meeting with service agents, suppliers, or clients on a periodic follow-up basis						
33. Setting objectives for the organization that are significant, attainable, and measurable						
34. Establishing a budget for the work of one's own group						
35. Reviewing the organization's operations in order to initiate needed improvement						
36. Coordinating relationships between groups						
031 032 033 034 035 036 **F**						
37. Originating technical ideas and designs						
38. Being flexible in approaching non-routine decisions						
39. Building a sense of pride and purpose in the work group						
40. Working efficiently under pressure						
41. Seeing that work schedules are compatible with safety						
42. Identifying possible barriers to communication within the organization						
037 038 039 040 041 042 **G**						
43. Reassigning individuals for better utilization of their abilities						
44. Making the responsibilities of the job clear to others						
45. Actively expanding the scope and responsibilities of one's own job						
46. Ensuring that members of the organization adhere to federal guidelines on employee selection procedures						
47. Accepting responsibility for the impact of organizational decisions on the local economy						
48. Making arrangements for the proper handling of important visitors						
043 044 045 046 047 048 **H**						
Approximate Final Column Totals	**6**	**6**	**12**	**12**	**6**	**6**

APPENDIX D

DEMOGRAPHIC QUESTIONNAIRE FOR NURSE EXECUTIVES

PLEASE ANSWER THE FOLLOWING QUESTIONS BEFORE RETURNING THIS QUESTIONNAIRE.

1) WHAT IS YOUR AGE? PLEASE CHECK APPROPRIATE ANSWER.

17
_____ 20-25 YRS. (1)
_____ 26-35 YRS. (2)
_____ 36-45 YRS. (3)
_____ 46-55 YRS. (4)
_____ OVER 56 YRS. (5)

2) WHICH OF THESE GRADUATE DEGREES HAVE YOU COMPLETED?

18
_____ MASTERS DEGREE IN NURSING (1)
_____ MBA (2)
_____ MBA/MSN (2)
_____ MHA (3)
_____ OTHER MASTERS DEGREE, PLEASE SPECIFY
_____ _____(3)
_____ DOCTORATE. PLEASE SPECIFY_____ (4)

3) HOW MANY TOTAL YEARS HAVE YOU WORKED IN NURSING ADMINISTRATIVE POSITIONS?

19
_____ LESS THAN 1 YR. (1)
_____ 1-5 YRS. (2)
_____ 6-10 YRS. (3)
_____ 11 OR MORE YRS. (4)

4) HOW LONG HAVE YOU BEEN WORKING IN YOUR PRESENT POSITION?

20
_____ LESS THAN 1 YR. (1)
_____ 1-5 YRS. (2)
_____ 6-10 YRS. (3)
_____ 11 OR MORE YRS. (4)

5) WHERE DID YOU RECEIVE YOUR MANAGEMENT AND BUSINESS TRAINING? PLEASE SELECT YOUR 1 MAJOR SOURCE OF TRAINING.

21
_____ MASTERS PROGRAM (1)
_____ ON THE JOB EXPERIENCE (2)
_____ SELF STUDY (3)
_____ SEMINARS OR FORMAL COURSES (4)
_____ OTHER, PLEASE SPECIFY
_____ (5)

DEMOGRAPHIC QUESTIONNAIRE

FOR NURSING LEADERS

PLEASE ANSWER THE FOLLOWING QUESTIONS BEFORE RETURNING THIS QUESTIONNAIRE.

1) WHAT IS YOUR AGE? PLEASE CHECK APPROPRIATE ANSWER.

17
_____ 20-25 YRS. (1)
_____ 26-35 YRS. (2)
_____ 36-45 YRS. (3)
_____ 46-55 YRS. (4)
_____ OVER 56 YRS. (5)

2) WHICH OF THESE GRADUATE DEGREES HAVE YOU COMPLETED?

18
_____ MASTERS DEGREE IN NURSING (1)
_____ MBA (2)
_____ MBA/MSN (2)
_____ MHA (3)
_____ OTHER MASTERS DEGREE, PLEASE SPECIFY
_____(3)
_____ DOCTORATE. PLEASE SPECIFY_____
(4)

3) WHICH MOST CLOSELY DESCRIBES YOUR CURRENT JOB?

19
_____ PROFESSOR, SCHOOL OF NURSING(1)
_____ PROFESSOR, OTHER SCHOOL (2)
_____ NURSE EXECUTIVE (3)
_____ OTHER _____(4)

4) HAVE YOU EVER BEEN THE TOP NURSE EXECUTIVE IN AN ACUTE CARE HOSPITAL?

20
_____ YES(1)
_____ NO (2)

APPENDIX E

THE MP-JFI SCORE SHEET

To hand-score the MP-JFI:

1. Each item in the test booklet is assigned a score according to the respondent's answer.

    Outstanding = 4
    More than Average = 3
    Less than Average = 2
    Little or None = 1

    Transcribe each item's score into the appropriate score box labeled "RS."

2. Add the raw scores vertically for each of the sixteen dimensions. Record each sum in the "Sums RS" box.

3. Use the table of norms for the MP-JFI to find the normalized standard scores. Record these scores in the "NSS" box.

(MP-JFI Interpretation and Research Manual, p. 3)

APPENDIX F

ALPHA RELIABILITY CO-EFFICIENT FOR MP-JFI

ALPHA RELIABILITY COEFFICIENTS FOR MP-JFI DIMENSION SCORES CALCULATED ON A VOCATIONALLY HETEROGENEOUS SAMPLE OF 882

DIMENSIONS	No of items	Alpha
1. Setting Organizational Objectives	10	.81
2. Financial Planning and Review	6	.62
3. Improving Work Procedures & Practices	9	.63
4. Interdepartmental Coordination	7	.64
5. Developing and Implementing Technical Ideas	9	.87
6. Judgement & Decision Making	8	.48
7. Developing Group Cooperation	10	.74
8. Coping with Emergencies	8	.67
9. Promoting Safety	9	.93
10. Communication	8	.63
11. Developing Employee Potential	9	.88
12. Supervisory Practices	9	.87
13. Self-Development	9	.86
14. Personnel Practices	10	.83
15. Promoting Community Relations	10	.81
16. Handling Outside Contacts	9	.86

(MP-JFI Interpretation and Research Manual, p. 12)

APPENDIX G

COMPOSITE SCORES OF EXECUTIVES AND MANAGERS, VARIOUS OCCUPATIONAL GROUPS

Numbers (N), Standard Deviations (SD), Means (M), and Normalized Standard Scores (NSS) for Executives and Middle Managers from a variety of occupations on the importance dimension of the MP-JFI.

Dimensions		Exec (N=56)	Mid-Mgr (N=124)
1. Setting Organizational Objectives	SD	5.3	6.17
	M	33.14	27.23
	NSS	67.00	58.00
2. Financial Planning and Review	SD	3.35	3.34
	M	16.32	15.66
	NSS	56.00	56.00
3. Improving Work Procedures & Practices	SD	3.31	3.95
	M	25.29	24.89
	NSS	56.00	54.00
4. Interdepartmental Coordinator	SD	3.37	3.63
	M	19.48	20.48
	NSS	52.00	54.00
5. Developing and Implementing New Ideas	SD	5.22	5.56
	M	19.18	18.07
	NSS	43.00	42.00
6. Judgement and Decision Making	SD	2.43	3.07
	M	25.89	25.70
	NSS	56.00	56.00
7. Developing Group Cooperation and Teamwork	SD	3.95	3.70
	M	31.48	32.11
	NSS	53.00	55.00
8. Coping with Difficulties and Emergencies	SD	5.13	4.79
	M	19.20	21.14
	NSS	41.00	46.00
9. Promoting Safety Attitudes and Practices	SD	5.83	7.30
	M	13.00	16.54
	NSS	46.00	51.00
10. Communications	SD	3.81	3.95
	M	25.04	24.60
	NSS	56.00	56.00
11. Developing Employee Potential	SD	3.29	4.40
	M	28.80	28.73
	NSS	57.00	57.00
12. Supervisory Practices	SD	3.98	3.94
	M	26.57	27.75
	NSS	51.00	53.00
13. Self-Development and Improvement	S	4.81	4.96
	M	22.61	24.22
	NSS	46.00	47.00
14. Personnel Practices	SD	5.37	6.38
	M	15.39	16.51
	NSS	50.00	54.00
15. Promoting Community-Organization Relations	SD	6.32	6.39
	M	17.93	16.11
	NSS	56.00	53.00
16. Handling Outside Contacts	SD	6.04	5.92
	M	21.61	19.13
	NSS	53.00	49.00

(MP-JFI Interpretation and Research Manual, p. 15)

APPENDIX H

TABLES OF RESEARCH FINDINGS

Table 16.

Composite Statistics of nurse Executives
for MP-JFI Ability Dimensions

Dim	Mean	Mode	Max	Min	Range	Median	Var	StdDev
1	56.0	52	70	33	37	57	77.00	8.78
2	51.7	53	73	26	47	53	119.00	10.93
3	54.3	54	78	32	46	54	93.80	9.68
4	56.3	59	76	36	40	57	66.48	8.15
5	40.7	35	74	22	52	42	75.96	8.71
6	49.8	53	65	25	40	50	83.43	9.13
7	56.6	64	79	24	55	57	129.60	11.38
8	46.6	35	71	26	45	46	136.80	11.70
9	46.2	34	63	34	29	47	57.38	7.57
10	50.3	46	76	25	51	51	107.20	10.35
11	53.7	55	69	42	27	55	36.55	6.04
12	47.9	45	56	40	16	48	15.83	3.98
13	48.3	49	69	32	37	49	53.90	7.34
14	53.0	50	69	38	31	54	44.90	6.70
15	58.3	53	72	44	28	58	52.04	7.20
16	51.0	48	68	33	35	51	34.91	5.90

Table 17.

Composite Statistics of MBA Nurse Executives for MP-JFI Ability Dimensions

Dim	Mean	Mode	Max	Min	Range	Median	Var	StdDev
1	62.8	67	68	49	19	65	32.60	5.71
2	56.9	61	73	40	33	61	085.70	09.26
3	50.6	43	74	38	36	45	130.00	11.42
4	52.7	49	65	39	26	52	52.00	07.21
5	40.8	30	58	30	28	37	85.80	9.26
6	54.9	63	65	33	32	59	121.10	11.00
7	53.9	59	79	24	55	55	160.00	12.65
8	39.1	31	65	26	39	33	139.00	11.80
9	43.5	39	51	34	17	44	031.00	05.60
10	53.7	46	69	38	31	53	076.56	08.75
11	54.9	46	64	46	18	55	032.20	05.67
12	47.2	48	54	41	13	48	013.52	03.67
13	46.8	49	56	35	21	49	040.47	06.36
14	51.2	42	60	42	18	52	035.02	05.91
15	64.1	72	72	44	28	67	067.07	08.19
16	50.3	46	58	45	13	48	022.23	04.71

Table 18.

Composite Statistics of Non-MBA Nurse Executives for MP-JFI Ability Dimensions

Dim	Mean	Mode	Max	Min	Range	Median	Var	StdDev
1	54.1	52	70	33	37	54	73.85	8.59
2	50.1	53	73	26	47	50	120.98	10.99
3	55.4	54	78	32	46	54	80.70	08.98
4	57.4	57	76	36	40	57	66.79	08.17
5	40.7	35	74	22	52	42	75.00	08.66
6	48.4	48	65	25	40	50	065.24	08.07
7	57.4	64	79	36	43	57	121.43	11.02
8	48.7	35	71	33	38	48	117.97	10.86
9	47.0	34	63	34	29	47	063.02	07.93
10	49.4	51	76	25	51	51	113.68	10.66
11	53.4	55	69	42	27	55	038.01	06.16
12	48.2	45	56	40	16	48	016.63	04.07
13	48.8	49	69	32	37	49	057.94	07.61
14	53.6	50	69	38	31	54	047.43	06.88
15	56.6	53	71	44	27	56	036.46	06.03
16	51.2	48	68	33	35	52	038.98	06.24

Table 19.

T-tests for Independent Samples of Education (MBA or Non-MBA) MP-JFI Dimensions

Dim	Mean Difference	P*	T-Value**	2-Tail Significance**
1	-8.68	.134	-3.42/-4.26	.001/.000
2	-6.78	.723	-2.02/-2.23	.048/.036
3	+4.78	.181	+1.59/+1.39	.118/.183
4	+4.72	.680	+1.88/+2.02	.065/.056
5	-.1795	.389	-.06/-.06	.949/.951
6	-6.54	.067	-2.37/-2.00	.021/.063
7	+3.49	.990	+.98/+.90	.333/.379
8	+9.65	.938	+2.77/+2.64	.008/.016
9	+3.51	.159	+1.40/+1.81	.142/.082
10	-4.33	.438	-1.34/-1.49	.186/.148
11	-1.54	.694	-.81/-.85	.422/.406
12	+.924	.258	+.73/+.78	.465/.445
13	+1.93	.835	+.83/+.92	.408/.367
14	+2.34	.606	+1.11/+1.21	.270/.238
15	-7.43	.162	-3.6/-3.04	.001/.008
16	+.892	.548	+.48/+.56	.636/.583

*Levene's Test for Equality of Variance,
P = Observed Significance Level

**T-test for Equality of Means,
Equal/Unequal Variances

Table 20.

Composite Statistics of Nurse Experts
for the MP-JFI Importance Dimensions

Dim	Mean	Mode	Max	Min	Range	Median	Var	StdDev
1	69.6	67	81	54	27	68	053.90	07.34
2	54.2	47	69	42	27	53	054.30	07.37
3	53.1	56	71	40	31	53	060.30	07.76
4	53.1	49	76	39	37	52	080.90	08.99
5	41.0	39	60	30	30	39	046.00	06.78
6	51.1	45	65	31	34	50	092.80	09.63
7	52.4	55	67	38	29	55	052.80	07.26
8	35.7	31	62	21	41	35	078.20	08.84
9	43.5	34	34	25	39	46	072.30	08.50
10	57.1	58	69	24	45	58	077.70	08.81
11	50.4	48	66	43	23	50	031.40	05.60
12	43.2	45	54	35	19	44	022.10	04.71
13	46.2	52	65	31	34	47	063.40	07.96
14	56.2	46	73	38	35	57	082.00	09.05
15	67.3	63	81	54	27	66	038.80	06.23
16	45.7	46	58	28	30	46	046.07	06.78

Table 21.

Composite Means for All Nurse Executives, MBA Nurse Executives and Non-MBA Nurse Executives for MP-JFI Ability Dimensions and Nurse Experts for Importance Dimensions

Dim	Nurse Executives	MBAs	Non-MBAs	Experts
1	56.03	62.76	54.08	69.60
2	51.65	56.92	50.13	54.23
3	54.32	50.61	55.40	53.10
4	56.33	52.69	57.42	53.13
5	40.70	40.84	40.66	40.96
6	49.84	54.92	48.37	51.06
7	56.63	53.92	57.42	52.43
8	46.56	39.02	48.73	35.73
9	46.19	43.46	46.97	43.50
10	50.32	53.69	49.35	57.10
11	53.72	54.92	53.37	50.43
12	47.94	47.23	48.15	43.23
13	48.34	46.84	48.77	46.16
14	53.05	51.23	53.57	56.23
15	58.31	64.07	56.64	67.26
16	51.00	50.30	51.20	45.70

Table 22.

T-tests for Independent Samples of Nurse Executives or Nurse Experts, MP-JFI Dimensions

Dim	Mean Difference	P*	T-Value**	2-Tail Significance**
1	-13.56	.136	-7.24/-7.67	.000/.000
2	-2.57	.064	-1.16/-1.31	.249/.194
3	+1.22	.213	+ .60/+ .64	.549/.521
4	+3.22	.539	+1.70/+1.65	.093/.105
5	-.2598	.172	-.14/-.15	.887/.878
6	-1.22	.376	- .58/- .57	.561/.568
7	+4.20	.110	+1.84/+2.10	.070/.038
8	+10.83	.008	+4.45/+4.86	.000/.000
9	+2.68	.373	+1.51/+1.46	.134/.151
10	-6.77	.128	-3.05/-3.21	.003/.002
11	+3.29	.514	+2.48/+2.54	.015/.014
12	+4.71	.584	+4.94/+4.69	.000/.000
13	+2.17	.406	+1.28/+1.25	.202/.217
14	-3.18	.020	-1.87/-1.70	.065/.096
15	-8.95	.280	-5.77/-6.05	.000/.000
16	+5.3	.867	+3.79/+3.62	.000/.001

*Levene's Test for Equality of Variance,
P = Observed Significance Level

**T-test for Equality of Means,
Equal/Unequal Variances

Table 23.

T-tests for Independent Samples of MBA Nurse Executives or Nurse Experts, MP-JFI Dimensions

Dim	Mean Difference	P*	T-Value**	2-Tail Significance**
1	-6.83	.472	-2.98/-3.29	.005/.003
2	-2.68	.232	+1.02/+.93	.315/.365
3	-2.48	.057	-.830/-.720	.410/.484
4	-.440	.344	-.160/-.170	.877/.866
5	-.1205	.064	-.05/-.04	.962/.967
6	+3.85	.545	+1.15/+1.09	.255/.286
7	+1.48	.240	+.490/+.400	.627/.697
8	+3.34	.169	+1.03/+.920	.310/.372
9	-.0385	.078	-.010/-.020	.988/.986
10	-3.40	.623	-1.17/-1.17	.250/.254
11	+4.48	.917	+2.40/+2.39	.021/.026
12	+3.99	.384	+2.72/+3.00	.010/.006
13	+.6795	.443	+.270/+.300	.787/.769
14	-5.00	.057	-1.82/-2.15	.076/.039
15	-3.18	.197	-1.40/-1.20	.169/.225
16	+4.6	.593	+2.22/+2.56	.032/.015

*Levene's Test for Equality of Variance,
P = Observed Significance Level

**T-test for Equality of Means,
Equal/Unequal Variances

Table 24.

T-tests for Independent Samples of Non-MBA Nurse Executives or Nurse Experts, MP-JFI Dimensions

Dim	Mean Difference	P*	T-Value**	2-Tail Significance**
1	-15.51	.286	-8.10/-8.37	.000/.000
2	-4.10	.090	-1.79/-1.93	.078/.057
3	+2.30	.484	+1.15/+1.18	.256/.242
4	+4.28	.451	+2.14/+2.10	.036/.040
5	-.3000	.313	-.16/-.17	.874/.867
6	-2.68	.088	-1.31/-1.26	.195/.213
7	+4.98	.106	+2.18/+2.36	.032/.021
8	+13.0	.048	+5.46/+5.68	.000/.000
9	+3.470	.577	+1.81/+1.78	.075/.080
10	-7.74	.103	-3.30/-3.42	.002/.001
11	+2.94	.505	+2.10/+2.14	.039/.036
12	+4.92	.895	+4.81/+4.67	.000/.000
13	+2.600	.500	+1.43/+1.42	.157/.162
14	-2.65	.041	-1.44/-1.36	.154/.179
15	-10.62	.883	-7.37/-7.32	.000/.000
16	+5.5	.967	+3.61/+3.55	.001/.001

*Levene's Test for Equality of Variance,
P = Observed Significance Level

**T-test for Equality of Means,
Equal/Unequal Variances

Table 25.

T-tests for Independent Samples of MBA Nurse Executives or Executives, MP-JFI Dimensions

Dim	Mean Difference	P*	T-Value**	Significance**
1	-.2308	.139	-.11	.915
2	+2.423	.060	+.50	.624
3	-2.884	.018	-.87	.398
4	-3.077	.068	-.08	.935
5	-2.903	.009	-.61	.550
6	-3.269	.012	-.10	.919
7	+1.423	.124	+.22	.829
8	-2.173	.035	-.63	.537
9	+.2115	.245	+.07	.944
10	-1.557	.028	-.61	.550
11	-.5769	.155	-.20	.847
12	-3.519	.396	-1.78	.095
13	-.5192	.125	-.17	.869
14	-.5687	.215	-.18	.659
15	+10.076	.072	+2.38	.031
16	-1.692	.361	-.65	.525

*Levene's Test for Equality of Variance,
P = Observed Significance Level

**T-test for Equality of Means

Table 26.

T-tests for Independent Samples of MBA Nurse Executives or Middle Managers, MP-JFI Dimensions

Dim	Mean Difference	P*	T-Value**	Significance**
1	+5.2692	.106	+1.76	.099
2	+3.1731	.031	+1.08	.298
3	-1.1346	.065	-.19	.851
4	+1.4423	.446	+.37	.716
5	-4.6538	.018	-1.63	.125
6	+1.1731	.012	+.37	.715
7	-1.0769	.194	-.17	.871
8	-4.6731	.035	-1.36	.195
9	-2.2885	.266	-.76	.460
10	-.8077	.038	-.31	.758
11	-2.5769	.200	-.87	.400
12	-6.7692	.818	-3.26	.005
13	-.9038	.047	-.43	.671
14	-.7692	.163	-.25	.808
15	+14.076	.073	+3.32	.005
16	-1.4423	.483	-.55	.592

*Levene's Test for Equality of Variance,
P = Observed Significance Level

**T-test for Equality of Means

Table 27.

T-tests for Independent Samples of Non-MBA Nurse Executives or Executives, MP-JFI Dimensions

Dim	Mean Difference	P*	T-Value**	Significance**
1	-8.91	.065	-2.05	.046
2	-4.36	.120	-.78	.437
3	+1.90	.048	+1.15	.262
4	+4.42	.062	+3.28	.002
5	-3.08	.086	-.70	.485
6	-6.82	.072	-4.84	.000
7	+4.92	.038	+2.87	.006
8	+7.48	.008	+3.90	.001
9	+3.72	.109	+.92	.360
10	-5.89	.024	-3.35	.002
11	-2.15	.108	-.88	.500
12	-2.59	.085	-1.25	.219
13	+3.27	.067	+.85	.398
14	+1.82	.109	+.52	.603
15	+2.64	.116	+.86	.393
16	-.800	.386	-.25	.803

*Levene's Test for Equality of Variance,
P = Observed Significance Level
**T-test for Equality of Means

Table 28.

T-tests for Independent Samples of Non-MBA Nurse Executives or Middle Managers, MP-JFI Dimensions

Dim	Mean Difference	P*	T-Value**	Significance**
1	-3.41	.053	-1.90	.083
2	-3.61	.078	-.65	.519
3	+3.65	.186	+.80	.429
4	+6.17	.357	+1.48	.146
5	-4.83	.130	-1.10	.276
6	-5.37	.072	-1.32	.195
7	+2.42	.082	+.43	.666
8	+4.98	.008	+2.60	.015
9	+1.22	.111	+.30	.763
10	-5.14	.031	-2.84	.008
11	-4.12	.139	-1.32	.194
12	-5.84	.324	-2.77	.008
13	+1.02	.133	+.27	.791
14	+1.57	.136	+.45	.654
15	+6.64	.117	+2.17	.035
16	-.550	.456	-.17	.864

*Levene's Test for Equality of Variance,
P = Observed Significance Level

**T-test for Equality of Means

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