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The Relationship of Nurse Managers' Leadership Styles and Nursing Unit Organizational Culture in Acute Care Hospitals in New Jersey

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THE RELATIONSHIP OF NURSE MANAGERS' LEADERSHIP STYLES
AND NURSING UNIT ORGANIZATIONAL CULTURE
IN ACUTE CARE HOSPITALS IN NEW JERSEY

BY

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ABSTRACT

THE RELATIONSHIP OF NURSE MANAGERS' LEADERSHIP STYLES
AND NURSING UNIT ORGANIZATIONAL CULTURE
IN ACUTE CARE HOSPITALS IN NEW JERSEY

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2007

Background & Purpose of the Study: Leadership and organizational culture are two important explanatory constructs of organizational performance. The relationship of these constructs, however, is not clearly understood. Moreover, little is known about the influence of nurse managers' (NMs) leadership styles on nursing units' organizational culture (NUOC). NMs can either shape or maintain nursing unit cultures that positively or negatively impact organizational outcomes. To be successful in their roles as leaders, regardless of their experience, NMs need to be trained about how the leadership-culture connection impacts organizational performance (e.g., organizational effectiveness). Thus, this study systematically explores and describes the relationship between NMs' leadership styles and NUOC in acute care hospitals in NJ.

Methods: A descriptive, correlational exploratory design utilizing established self-administered measurement tools was implemented at four acute care hospitals in NJ involving a convenience sample of 37 NMs (18 critical care, 19 non-critical care) and 278 staff nurses (148 critical care, 130 non-critical care). The Multifactor Leadership Questionnaire Form 5X (MLQ 5X) and Denison's Organizational Culture Survey (DOCS) were used to measure the NMs' leadership styles and NUOC, respectively. Demographic characteristics and nursing unit profiles of the sample and MLQ and DOCS data were collected. Subsequently, the data were analyzed using descriptive and inferential statistics.

Results: Positive moderately strong correlations were found between transformational leadership (TL) and NUOC measures. TL was found to be a strong predictor of *mission* trait culture (an attribute of organizational effectiveness). A weak correlation was found between transactional leadership (TR) and NUOC. Of the three TR factors, *contingent reward* was moderately correlated with NUOC. Negative correlations were found between *laissez-faire* leadership and NUOC. Non-critical care NMs were perceived by their staff nurses (SNs) as higher transformational leaders than their critical care counterpart, and non-critical care SNs rated their nursing units significantly higher than critical care SNs on all four OC dimensions. Results were all statistically significant at the alpha level of 0.01.

Conclusion: A relationship exists between the leadership styles of NMs and NUOC. TL, *contingent reward* and high levels of OC traits are essential to achieving and maintaining organizational effectiveness of acute care hospitals. Implications to nursing education, practice, research and future directions of the study are discussed.

Chapter I

INTRODUCTION

Background of the Problem

Over the past several decades, the phenomena of leadership and organizational culture continue to predominate in mainstream business and healthcare literature. Scholars in various disciplines have defined these phenomena as the driving forces in the success or failure of an organization (Block, 2003; Schein, 2004). However, a lack of scholarly work that directly addresses leadership-organizational culture relationships is evident in the literature (Block, 2003). Furthermore, in nursing research, little is known about the relationship, if any, between leadership and organizational culture, particularly within the context of first-line leadership in nursing units in acute care hospitals (Appendix A).

Block (2003) and McNeese-Smith (1995) both suggest that effective organizations have first-line leaders that demonstrate transformational leadership behaviors. A transformational leader is one that pays attention to the needs of his or her followers, and motivates and assists his or her followers in achieving their fullest potentials (Northouse, 2004). Similarly, a nurse manager (first-line nursing leadership) that practices transformational leadership creates and implements a vision of what can be accomplished at work and empowers the staff with that vision, while keeping abreast of

healthcare changes and interacting with others inside and outside of the organization (Ohman, 2000).

In today's healthcare, nursing unit managers (i.e. nurse managers) must demonstrate leadership styles that are appropriate for the constantly changing, complex and turbulent healthcare delivery system, particularly in acute care hospitals. Such a climate is characterized by a cost and time constrained work environment, nursing shortage, increased patient acuity, use of sophisticated technology in patient care, and the challenge of achieving desired patient outcomes (Contino, 2004; Mathena, 2002; Ohman, 2000). Furthermore, NMs must possess a strategy related to accomplishing more with decreasing resources, molding staff members into clinical or unit-based leaders, motivating staff members to go beyond their own self-interests for the good of the organization, and elevating staff performance (Ohman, 2000). Despite these difficulties, this strategy must result in high quality, cost-effective patient care, accompanied by high levels of patient satisfaction. Vance and Larson (2002) suggest that improvement of client services (in healthcare, *the patient*; in business, *the customer*) is the ultimate goal of leadership in an institution. Implementing transformational leadership is a strategy that can assist nursing unit managers in achieving the above mentioned goals as well as addresses the challenges of the current healthcare climate, as demonstrated by positive organizational outcomes

orchestrated by nursing unit managers during turbulent times in healthcare (Tourangeau & McGilton, 2004).

Organizational culture is a significant variable influencing organizational performance (effective or ineffective). According to Schein (2004), organizational culture consists of the deep underlying assumptions, beliefs, and values that are shared by members of the organization and that operate unconsciously. These are learned responses to a group's problems of survival in its external environment and the problems of internal integration. If a given set of people shared a significant number of important experiences in the process of solving external problems, one can assume that the group has developed a shared view of the world and its place of work (Schein, 2004). In the field of business, Denison and Mishra (1995) found that organizational culture has a direct link to the effectiveness of an organization. However, specific research that pertains to the link between organizational culture and effectiveness in the context of nursing or patient care services, in general, is limited. The majority of the nursing literature that addresses organizational culture research includes assessment, diagnosis, or evaluation of nursing unit cultures. Typically, these studies were carried out before and after implementation of organizational change (Forsythe, 2005; Ingersoll, et al., 2000; Jones & Redman, 2000), performance improvement (Baker, et al., 2003), patient care delivery models (Jones, DeBaca, & Yarbrough, 1997), and innovations in nursing units (Coeling & Simms, 1993b).

Clearly, leadership and organizational culture impact organizational performance. For nearly two decades, nurses have been investigating these organizational constructs and their implications to the nursing scope of practice (Garret, 1991; Kratina, 1990; McDaniel & Stumpf, 1993). They have identified that leadership and organizational culture are two important variables affecting organizational outcomes (Kratina, 1990; McDaniel & Stumpf, 1993). For example, nursing unit managers who have used transformational leadership styles have shown a positive impact on organizational outcomes (McNeese-Smith, 1995) such as on work environment (Whiley, 2001) and staff nurse retention (Kleinman, 2004a; Kleinman, 2004b). Moreover, a nursing service or unit that typifies a *constructive* organizational culture (e.g., characterized by a “people-oriented” culture) has shown high levels of patient satisfaction (Wooten & Crane, 2003), while a *hierarchical* or bureaucratic type of organizational culture negatively impacts nurses’ retention and quality of work life (Gifford, 2002). Other general positive and negative organizational outcomes in nursing that have been reported in research literature included staff job satisfaction (Medley & Larochelle, 1995), productivity, organizational commitment (Loke, 2001; McNeese-Smith, 1995; McNeese-Smith, 1997), empowerment (Kuokkanen, Leino-Kilpi, & Ktajisto, 2003; Morrison, Jones, & Fuller, 1997), quality patient care (Clegg, 2000; Sovie, 1994), patient satisfaction (Lageson, 2004;

McNeese-Smith, 1999), and burn out (McCain, 1994; Stordeur, D'hoore, & Vandenberghe, 2001).

Despite the many references in mainstream business and healthcare literature on the impact of leadership and organizational culture on organizational performance, a clear relationship between leadership and organizational culture has not been definitively demonstrated in nursing literature. In addition, there is a lack of research that differentiates the nurse managers' leadership styles by areas of practice (e.g., critical care and non-critical care nursing units). McNeese-Smith (personal communication, January 13, 2005) asserts that leadership behaviors of nursing unit managers (NMs), in fact, drive organizational culture. However, no research has been done to systematically examine or explain the relationship between NMs' leadership styles and nursing units' organizational culture in acute care hospitals. Ultimately, understanding this relationship will provide a better perspective on how to potentially influence organizational effectiveness, specifically patient satisfaction, which is a key measure of organizational performance (effectiveness) in acute care hospitals today.

Need for the study

Clearly, it is evident that little is known about the relationship between NM's leadership and nursing unit organizational culture. Several published articles that addressed these phenomena in the late 1980's to early 1990's were descriptive studies, thus providing limited understanding of the

relationship. Additionally, the majority of the investigators examined leadership and culture as two distinct variables that influence the organizational outcomes of nursing services in acute care hospitals (Huber et al., 2000). Furthermore, these studies were mainly concerned with the role of nurse executives and chief nursing officers, with minimal attention to the role of NMs and the impact of NM's leadership style on nursing unit organizational culture (Adams, 1994; Kratina, 1990; McDaniel & Stumpf, 1993); a reflection of the healthcare delivery system of the past in which organizational success relied on the top-level leadership. This practice has shifted to first-line leadership such as NMs, who drive the success or failure of nursing units, which in turn affects the global organizational performance of acute care hospitals (e.g., patient satisfaction ratings) today. Transformational leadership and a desirable organizational culture are required in achieving high levels of patient satisfaction and other organizational outcomes (e.g., decrease in nursing staff turnover or attrition rate) that impact the financial performance of the hospital. Thus, research is needed now to further examine and clearly understand the relationship between NMs leadership styles and nursing unit organizational culture in the current healthcare delivery system, which is often labeled as complex, turbulent, chaotic, fragmented, and expensive (Rosentein & O'Daniel, 2005). Based on Rosentein and O'Daniel's assertion, it is possible to conclude that the NM's leadership role is not only pivotal in the development and maintenance of nursing unit cultures (Whiley, 2001), but

also has a direct impact on working conditions, work environment, and overall success of patient care outcomes (Mathena, 2002).

The nature and scope of the roles of first-line nursing leadership has changed overtime since its conceptualization in the past century, and still continues to evolve (Aroian et al., 1997; Browne & Miller, 2003; Horvath et al., 1997). According to Mathena (2002), NMs are considered as the “internal stakeholders in the hospital system.” They comprise the largest group of first-line managers in the hospital setting. Central to the NMs’ role today is the implementation of the hospital’s vision, mission, philosophy, goals, and core values to the grassroots of patient care – the nursing units. In addition, they are required to demonstrate knowledge and skills in system process and organizational outcomes. This helps in the achievement of appropriate hospital patients’ length of stay and efficient utilization of resources (Saint Barnabas Medical Center, 2005). To be effective in achieving such role expectations, Contino (2004) suggests that NMs in the acute/critical care settings must demonstrate certain leadership competencies that include organizational management, communication, data/operational analysis and strategic planning, and creation/visionary skills (i.e. transformational leadership). Thus, by having the required competencies suggested by Contino, NMs will be successful in aligning his or her nursing unit to achieving the hospital’s strategic goals and objectives.

Appropriate education and training are crucial to the success or failure of NM's role implementation. The role of the NM of an acute/critical care unit is one of the most difficult and challenging roles in healthcare over the past decade (Heller et al., 2004; Whiley, 2001). According to Heller et al., a cadre of NMs who are more competent and better prepared is crucial to achieving positive organizational outcomes. Unfortunately, anecdotal incidents and research shows that NMs are frequently ill-prepared in assuming their roles (Mathena, 2002), and new NMs often do not receive the support they need to succeed (Grindel, 2003). NMs who were not properly prepared for their roles fail to create a desirable work environment and to achieve positive organizational outcomes, which often result in a high nursing staff attrition rate or turnover (Whiley, 2001). Thus, the need for the NM to be educated, trained or retrained about the critical impact or "bottom-line" of leadership-culture relationship outcomes, which is organizational effectiveness, is imperative.

Clearly, with the understanding of the leadership-culture dynamic, NMs in acute care hospitals can adopt leadership styles that positively impact organizational culture, thereby enhancing the organizational performance of nursing units. Similarly, it will provide practitioners, educators, and scholars the information for the development and implementation of best leadership practices and advancement of the NM's knowledge. Key to advancement and application of nursing knowledge is theory development, in which theories are

used to guide and shape professional practice (Burns & Grove, 1997). In this perspective, however, the leadership-organizational culture phenomena are comprised of *immature* concepts, which mean abstraction, and whose meanings are multiple and varied. This is due, in part, to the lack of empirical investigations on the leadership and culture constructs in the context of nursing units. According to Waltz, Strickland, and Lenz (2005), maturation of the concept such as the leadership-culture relationship requires extensive research and refinement, so that meanings and boundaries of the concept are clear, and thus can be operationalized effectively for future studies. Moreover, thoughtful and careful definition and operationalization of the aforementioned concept is essential to building theory and applying knowledge (Waltz et al., 2005). For years, nurses have formulated conceptual frameworks or models, and have utilized these as the foundations for advancing nursing knowledge and shaping professional practice successfully (Burns & Grove, 1997; Polit & Hungler, 1991). A framework that ties leadership style to organizational culture would be equally successful and obviously important to nursing discipline. Thus, a conceptual model that would define, explain and predict the relationship of NMs' leadership styles and nursing unit organizational culture and their impact on organizational performance is needed.

Purpose of the Study

The main purpose of this study is to describe and examine the nature of the relationship between nursing unit managers' (NMs) leadership styles and nursing units' organizational culture in acute care hospitals that have achieved excellent organizational performance as demonstrated by a consistent increase in patient satisfaction ratings.

The secondary purpose of this study is to bridge the gap in the nursing literature concerning leadership-culture knowledge specifically in the context of NMs' leadership roles in patient care units today.

Finally, this study will also serve as a catalyst for further exploration and research on the influence or impact of NMs' leadership styles on nursing units' organizational culture.

Research Questions

Due to a lack of empirical findings and the need to clearly understand the relationship between nursing unit managers' leadership styles and the nursing units' organizational culture in acute care hospitals, two primary research questions were framed:

- Does a relationship exist between the nursing unit managers' leadership styles and nursing unit's organizational culture as perceived by staff nurses?
- If a relationship exists, to what extent does nursing unit managers' leadership styles predict a specific type of nursing unit organizational culture?

Additionally, two subsidiary questions were framed to describe the nursing unit managers' leadership styles and the nursing unit organizational cultures of the sample:

- Is there a difference in the leadership styles among nursing unit managers' in critical care and non-critical care units as perceived by their nursing staff?
- Is there a difference in organizational culture *traits* in critical care and in non-critical care units as perceived by the nursing staff?

Research Hypotheses

Based on the research questions, four hypotheses were developed. The *first* hypothesis (*H1*) postulates that there is an existing relationship between nursing unit managers' leadership styles and nursing unit organizational culture as perceived by the nursing staff. This hypothesis is expanded into three sub-hypotheses to further understand the relationship of leadership and organizational culture phenomena in nursing units:

H1a: Staff nurses' (SNs) perceptions of their nursing units' organizational culture in terms of *mission* and *adaptability*¹ are positively associated with the level of their nursing unit manager's transformational leadership².

H1b: SNs' perceptions of their nursing units' organizational culture in terms of *involvement* and *consistency*¹ are positively associated with the nursing unit manager's transactional leadership².

H1c: SNs' perceptions of their nursing units' organizational culture in terms of *mission*, *adaptability*, *involvement*, and *consistency*¹ are negatively associated with the level of their nursing unit manager's laissez-faire leadership².

¹Mission, Adaptability, Involvement, and Consistency are four cultural traits comprising The Denison's Organizational Culture Model (DOCM) discussed in Chapters II and III.

²Transformational Leadership, Transactional Leadership, and Laissez-faire Leadership are components of the full-range leadership theory discussed in Chapters II and III.

The perceived leadership styles of nursing unit managers (NMs) and nursing unit organizational culture is based on Schein's (2004) assertion on how leaders transmit their messages to their subordinates, which is referred to as the *primary embedding mechanisms* (Appendix A). These mechanisms displayed by the NMs (e.g., leadership behaviors or styles) on a daily basis are considered as powerful signals to subordinates about the essential characteristics of the organization's culture. In this context, it was hypothesized that a NM who demonstrates transformational leadership characteristics such as *individualized consideration (attributed and behavior)*, *intellectual stimulation*, *inspirational motivation*, and *idealized influence*, would be more likely to use primary cultural embedding mechanisms that emphasize and reinforce the importance of adapting quickly to the demands of the environment external (Block, 2003) to the nursing unit. Conversely, a NM who demonstrates transactional leadership characteristics such as *contingent reward* and *management-by-exception (active)* would be more likely to use primary cultural embedding mechanisms that emphasize and reinforce the importance of maintaining a nursing unit whose "internal operations are well integrated" (Block, 2003). Finally, a NM who demonstrates laissez-faire leadership characteristics, such as not making any decisions, abdicating responsibility, or consciously distancing (non-transactional) himself or herself from the nursing staff would be more likely not to use primary cultural

embedding mechanisms, which would ultimately result in negative nursing unit outcomes.

The *second* hypothesis (*H2*) postulates that regardless of the nursing units area of practice (critical care versus non-critical care), transformational leadership is the strongest predictor of a nursing unit organizational culture characterized by the *mission trait*. According to Fisher (2000), of the four organizational culture traits, *mission* was found to be the major culture trait that influences organizational effectiveness.

The *third* hypothesis (*H3*) postulates that there will be a difference in leadership styles between critical care and non-critical care nursing unit managers as perceived by their staff nurses.

Finally, the *fourth* hypothesis (*H4*) postulates that there will be a difference in organizational culture between critical care and non-critical care nursing units in acute care hospitals.

Chapter II

REVIEW OF RELATED LITERATURE

Introduction

The business and healthcare literature are replete with research on leadership and organizational culture. Scholars in various disciplines have defined and operationalized the concepts of leadership and organizational culture in several ways. Debates in the literature continue concerning conceptualization and methodological approaches in leadership and organizational culture studies. However, many agree that leadership and organizational culture are two important explanatory constructs influencing organizational outcomes or performance (Burke & Litwin, 1992; Schein, 2004). Despite the many references concerning leadership and organizational culture, few studies have been done that explain the leadership-culture relationship in business (Block, 2003), nursing or patient care services and healthcare in general (Gershon et al., 2004; Kratina, 1990; McDaniel & Stumpf, 1993).

The main purpose of this review is to examine selected articles in which leadership styles and organizational culture constructs have been operationalized and studied in the context of nursing. A brief overview of the historical events and evolution of leadership theories is presented. Since leadership styles and organizational culture are the two major concepts of

interest in this study, a comprehensive discussion of the Full-range Leadership Theory (FRLT) and Denison's Organizational Culture Model (DOCM) is included. The FRLT and DOCM comprise the theoretical framework of this study.

Leadership Styles

The body of scholarly knowledge surrounding leadership is widespread in the literature of many professions, organizations, and corporate life (Vance & Larson, 2002). Over the past 100 years, leadership has been the subject of interest in various disciplines. The prevailing interest in leadership research arises out of the documented evidence that a leader's integral role includes influencing positive, productive workplace behavior or team performance (Block, 2003; Dionne & Yammarino, 2004; Van Wart, 2003). Leadership is a well studied subject, however, not well understood. It is a complex and a multidimensional concept, in which investigators are confronted with myriad of challenges when studying leadership phenomenon. For example, the definition of leadership has been iterated numerous times (Block, 2003), and to this date, debates in the literature still exist regarding the ideal definition of leadership (Levey, Hill, & Greene, 2002).

Scholars in leadership research have adopted a broad range approach to defining leadership over the past 50 years (Levey et al., 2002). According to Gregoire and Arendt (2004), leadership research has examined the phenomenon by using many different approaches, from a very simplistic

definition of traits to more complex process involving interactions, emotions, and learning. Krill and Carter (1997) suggest that the major focus of contemporary leadership theories is examination of the relationship between leader and followers. In contrast, Vance and Larson (2002) argue that leadership can be viewed as both a perceptual and a behavioral phenomenon, asserting that finding a single definition of leadership appears to be impossible. Furthermore, the authors explain that the appropriate definition of leadership should depend on the theoretical, methodological, and substantive aspects of *leadership* being considered. This means that investigators could define leadership (i.e. variable) based on theories and available scientific literature in which the concept of *leadership* has been operationalized and studied in a particular field or discipline.

The roles of leaders, the leadership process, and the effects of leadership on followers or subordinates have evolved over time and are primarily influenced by global economic, social and political changes (Vance & Larson, 2002). Van Wart (2003) argues that it is not possible to clearly categorize all of the mainstream leadership literature into specific time periods; however, it is possible to capture the dominant themes and interests for a heuristic overview. Van Wart then illustrated the eras of leadership theories and research with corresponding time frames and features as follows:

- *Great man theory* (Pre-1900), which continues to predominate in popular biographies today. This theory focuses on the emergence of a

great figure that has substantial influence on the society. This era was influenced by notions of rational social change by uniquely talented and insightful individuals such as George Washington or Martin Luther.

- *Trait theory* (1900-1948), emphasized the individual personality characteristic or traits (e.g., physical, personal, motivational, and aptitudes), and skills of leaders (e.g., the individual's ability to communicate and influence effectively). These were desirable leadership traits that leaders demonstrate. The influential forces in this era included scientific methodologies and scientific management. For example, roles were defined with corresponding assignments of competencies of those roles.
- *Contingency theory* (1948-1980s), emphasized the situational variables leaders must deal with, particularly with regard to the performance and follower variables. This theory shifted from traits and skills to behaviors. A behavioral leadership example included the energy level of the leader and his or her communication skills to accomplishing role clarification and staff motivation. This era was influenced by the rise of human relations theory, behavioral science, etc.
- *Transformational theory* (1978-present). The emphasis of this theory is on the leaders who create change in deep structures, major processes, or overall culture (organizational change). Visionary and charismatic

are qualities of transformational leaders. This era is “influenced by the loss of American dominance in business, finance, and science, and the need to reenergize various industries, which had slipped into complacency” (Van Wart, 2003, p. 218) resulted in loss of profit, poor organizational performance, etc.

- *Servant leadership theory* (1977-present). This theory emphasizes the ethical responsibilities to followers, stakeholders, and society. For example, business theorists tend to emphasize *service* to followers (e.g., employees) while political theorists emphasize *service* to citizens. This era was influenced by social sensitivities in the 1960s and 1970s.
- *Multifaceted leadership theory* (1990s –present) emphasizes the integration of major leadership paradigms, such as transformational and transactional. This contemporary leadership theory, which is mainly affected by the competitive global economy and marketplace, provides a more sophisticated and holistic or broad range approach to leadership.

Nursing scholars have used multifaceted leadership theory as a conceptual framework in leadership and administration studies over the past several years (Huber et al., 2000; Kee et al., 1996). However, the use of a much broader range of multifaceted leadership theory (e.g., the full-range leadership theory) in nursing research is limited (Kleinman, 2004a).

The Full-range Leadership Theory (FRLT)

Transformational and transactional leadership are two major paradigms of leadership that have provided the foundation for the study of leadership among disciplines during the last two decades (Vance & Larson, 2002). Avolio and Bass (2004) referred to these paradigms as two broad categories of leadership behavior that are distinct but not mutually exclusive. The transactional and transformational leadership theory originally conceptualized by Bass in the 1980s (Bass, Waldman, & Avolio, 1987) has been expanded in recent years to a *full-range leadership theory* (Antonakis, Avolio, & Sivasubramaniam, 2003). According to Antonakis et al. (2003) and Avolio and Bass (2004), the full-range of leadership comprises leadership dimensions that are highly transformational at one end to highly avoidant at the other end. The FRLT consists of three broad categories of leadership styles, which include *transformational*, *transactional*, and *nontransactional laissez-faire* leadership.

Transformational leadership is the ability to influence others toward achievement of extraordinary goals by changing the followers' beliefs, values and needs (Avolio & Bass, 2004). The key aspects of transformational leadership include the following five elements: (1) *Idealized influence (attributed)*, which refers to the socialized charisma of the leader, where the leader is perceived as being confident and powerful, and where the leader is viewed as focusing on higher-order ideals and ethics; (2) *Idealized influence*

(*behavior*), which refers to charismatic actions of the leader that are centered on values, beliefs, and a sense of mission; (3) *Inspirational motivation*, which refers to the ways leaders energize their followers by viewing the future with optimism, stressing ambitious goals, projecting and idealized vision, and communicating to followers that vision is achievable; (4) *Intellectual stimulation*, which refers to leader actions that appeal to followers' sense of logic and analysis by challenging followers to think creatively and find solution to difficult problems; (5) *Individualized consideration*, which refers to leader behavior that contributes to follower satisfaction by advising, supporting, and paying attention to the individual needs of followers, and thus allowing them to develop and self-actualize (Antonakis et al., 2003; Avolio & Bass, 2004). Thus, transformational leaders provide new direction, new inspiration, and new behaviors for their organizations (Tucker & Russel, 2004).

Transactional leadership is an exchange process based on the fulfillment of contractual obligations and is typically implemented by setting objectives, and monitoring and controlling outcomes (Antonakis et al., 2003). The key aspects of transactional leadership include the following three elements: (1) *Contingent reward leadership* (i.e., constructive transactions), which refers to leadership behaviors focused on clarifying role and task requirements and providing followers with material or psychological rewards contingent on the fulfillment of contractual obligations; (2) *Management-by-exception active* (i.e., active corrective transactions), which refers to the active vigilance of a

leader whose goal is to ensure that standards are met; (3) *Management-by-exception passive* (i.e., passive corrective transactions), which refers to leaders that only intervene after non-compliance has occurred or when mistakes have already happened (Antonakis et al., 2003; Avolio & Bass, 2004).

While transactional leadership is generally based on bureaucracy and organizational standards (Tucker & Russell, 2004), *nontransactional laissez-faire leadership* represents the absence of a purposeful interaction between the leader and the follower, in which the leader avoids making decisions, abdicates responsibility, and does not use his or her authority (Antonakis, et al., 2003). It is considered *active* to the extent that the leader “chooses” to avoid taking action. Moreover, this leadership component is generally considered as the most passive and ineffective form of leadership (Block, 2003).

Studies on Nurse Managers' Leadership Styles

Studies surrounding leadership behaviors of nurse executives, chief nursing officers and nurse managers are numerous. In nursing literature, nurses' *leadership behavior* is frequently reported as a significant variable that influences organizational outcomes (McNeese-Smith, 1995). From a research methodology perspective, review of the literature shows that using of survey instruments is a common approach to measuring nurses' leadership behaviors (also referred to as leadership styles). There are 18 instruments

that have been used to measure leadership behaviors of nurses. Of these, the Leadership Practice Inventory (LPI) and Multifactor Leadership Questionnaire (MLQ) have been found to be the most popular in nursing leadership and administration literature because of their substantial psychometric properties and ease of use (Huber et al., 2000).

The LPI is one of the most popular quantitative measurement tools utilized in nursing leadership research. It is widely used for examining NMs' leadership behaviors and the effect of such behaviors in organizational outcomes (McNeese-Smith, 1995). The LPI is a powerful tool for assessing individuals' leadership behaviors based on the conceptual model of Kouzes and Posner's Five Exemplary Leadership Practices (McNeese-Smith, 1995). Such leadership practices include (1) *model the way*, which means being role model, setting an example, and above all personal credibility; (2) *inspire a shared vision*, denotes the leader's vision of the future and enlists others in a common vision; (3) *challenging the process*, refers to taking risks, innovative, and changed-oriented leadership characteristics; (4) *enable others to act*, this pertains to the leaders' behaviors that promote teamwork, empowerment, trust, and not hoarding power they have but giving it away; (5) *encouraging the heart*, which means recognizing contributions and celebrating organizational values and victories, and demonstrating caring (Kouzes & Posner, 2003). These leadership practices are consistent with transformational leadership (Tourangeau & McGilton, 2004).

In the early 1990s, McNeese-Smith (1995) conducted two studies examining the effects of department managers' leadership behaviors on employee outcome: job satisfaction, productivity and organizational commitment. The Leadership Behaviors Model (Five Exemplary Leadership Practices) was selected as a conceptual framework for both studies that were implemented in two settings (Seattle 1991 and Los Angeles 1993). The research design, procedure, instrumentation (e.g., LPI) and statistical analyses used were the same in both studies, with the exception of the sampling method and participants' demographic characteristics. Despite the dissimilarities in sampling and demographics, McNeese-Smith found similarities in the results such that NMs' LPI scores positively correlated with employee outcome scores. For example, the NMs composite LPI scores for Seattle (ST) ($M = 0.23$) and Los Angeles (LA) ($M = 0.33$) revealed low to moderate correlations with productivity (ST/LA $r = 0.23/0.33$, $p < 0.001$), job satisfaction (ST/LA $r = 0.30/0.48$, $p < 0.001$), and organizational commitment (ST/LA $r = 0.36/0.47$, $p < 0.001$). McNeese-Smith argued that the similarities of findings in different settings strengthened the conclusion that transformational leadership makes a difference to hospital employees, particularly in times of constant change.

Looke (2001) replicated McNeese-Smith's (1995) studies in Singapore, and found some similarities in the findings, despite the differences in the samples and the settings. Using Pearson's moment correlation coefficient,

Looke found positive correlations of NMs' composite LPI scores to employees' productivity ($r = 0.19, p = 0.01$), job satisfaction ($r = 0.44, p = 0.01$), and organizational commitment ($r = 0.29, p = 0.01$). Furthermore, multiple regression analyses revealed that 29% of job satisfaction, 22% of organizational commitment and 9% of productivity were explained by the use of leadership behaviors. These findings further strengthened the evidence suggesting that in order for nurse leaders to be effective in the 21st century, NMs must practice transformational leadership behaviors. Based upon these findings, Looke suggested that it is important for all NMs be trained and retrained to incorporate these desirable leadership behaviors in their day-to-day management activities.

In the United Kingdom, Bowles and Bowles (2000) compared leadership behaviors of nurse leaders in Nursing Development Units (NDUs) and conventional clinical settings in England. According to Bowles and Bowles, NDUs were originally created as centers of nursing excellence, innovation and leadership development. Two matched samples of nurses ($N = 70$) participated in the study, which included nurse leaders ($N = 14$) and subordinates ($N = 56$). Results of this study indicated that NDU nurse leaders have higher LPI scores (transformational leadership behaviors) compared to non-NDU leaders, as rated by their subordinates. Based on the findings, Bowles and Bowles suggested that NDU nurse leaders have enhanced

leadership potential and that a formalized nursing leadership development within the NDU may promote the emergence of transformational leadership.

From a measurement standpoint, the LPI offers a greater advantage in terms of psychometric properties compared to other leadership measurement instruments (Tourangeau & McGilton, 2004). However, the LPI does not measure other categories of leadership behaviors known in business and in healthcare studies such as transactional and nontransactional laissez-faire leadership. The present study explores the relationship between leadership and organizational culture and is not limited to a single leadership style. This provides a comprehensive exploration of potential relationships. As a result, a more comprehensive measurement tool was sought. The MLQ is the only instrument that measures these broad ranges of leadership categories (i.e., FRLT). In the past two decades, the MLQ has guided investigators in examining nurse executives and NMs leadership behaviors in relation to organizational outcomes (Vance & Larson, 2002). According to Kleinman (2004a), most of the studies using the MLQ in the past have focused on examining transformational and transactional leadership with little attention on nontransactional laissez-faire leadership.

Medley and Larochelle (1995) investigated the relationship between head nurse (now referred to as NMs) leadership styles and staff nurse job satisfaction using the older version of the MLQ that measured transactional and transformational leadership paradigms. Findings of this study indicated

that staff nurses in acute care hospitals did perceive their head nurses' leadership styles as transactional and transformational. Furthermore, Pearson's product moment correlation coefficient revealed no significant relationship between transactional leadership style and staff nurses' job satisfaction ($r = 0.05$, $p < 0.001$) suggesting the transactional leadership styles of the head nurses had no associations in the staff nurses' job satisfaction or dissatisfaction in this particular study. However, head nurses with high transformational leadership scores were more likely to have staff nurses with higher job satisfaction scores and longer association with their staff nurses than transactional leaders ($r = 0.40$, $p < 0.001$). This may indicate that the transformational leadership style promoted retention and prevented staff turnover.

Morrison, Jones, and Fuller (1997) explored the relationship between leadership behaviors and empowerment and their effect on job satisfaction among the nursing staff in multi-specialties acute care nursing units, including critical care. Results of their study showed that both transformational and transactional leadership styles are positively related to the job satisfaction of registered nurses (RNs), with Pearson's moment correlation coefficients (r) of 0.64 and 0.35, respectively ($p < 0.05$). However, only transformational leadership has been found to be positively related to empowerment of RNs ($r = 0.26$, $p < 0.05$). Moreover, the results revealed that the contribution of leadership behaviors and empowerment varies by type of personnel.

Perceived nurse leadership behaviors and empowerment scores were lower among the unlicensed personnel group as compared to RNs. Interestingly, with regard to job satisfaction, the RNs and unlicensed personnel may differ in how much influence may be exerted on them by their immediate leaders in this study. This finding is primarily related to the nature of the tasks of RNs and unlicensed personnel, and because of their professional status, RNs perceived their jobs as having greater meaning as well as being more determined and having a greater effect on their work environment compared to unlicensed nursing personnel.

Studies specific to critical care NMs' leadership styles are limited, and most of these have utilized "older" leadership theories such as *contingency theory* (Ohman, 2000) that is not consistent with the dynamics of 21st century healthcare. According to Ohman, empirical findings are needed to support a preferred leadership style that critical care NMs should adopt in order to be successful in their changing and increasingly demanding roles. Ohman explored transformational and transactional leadership styles within the changing roles of critical care NMs in concert with the demands and constantly evolving healthcare delivery system. A non-randomized sample of 240 first-line NMs in adult critical care settings with a unit bed size of at least 5 beds and a hospital size of at least 100 beds from six upper Midwestern states participated in this study. A first-line NM was operationally defined as a registered nurse who held a manager position with 24-hour responsibility for

an adult critical care unit, and was responsible for personnel supervision and evaluation of staff performance. The MLQ-5X was utilized in describing the preferred leadership styles of the sample.

Ohman (2000) found that the transformational leadership style characterized the key qualities that a NM should demonstrate in order to be effective in today's critical care environment. In addition, Ohman found that previous leadership experiences positively influenced the degree of transformational leadership, whereas the highest educational preparation, the number of staff supervised, years of previous nursing management experience and organizational management structure all influenced the transformational and transactional leadership styles of first-line critical care NMs. Thus, to be effective in contemporary healthcare, findings of this study suggest that critical care NMs must practice transformational leadership.

In the current healthcare environment, NMs are confronted with a myriad of leadership and management (e.g., nursing unit operational activities) challenges. Of these, staff nurse retention in the midst of a nursing shortage imposes the most significant challenges confronting NMs' leadership.

Kleinman (2004b) described the perceptions of NM leadership behaviors associated with staff nurse turnover comparing the perceptions of NM leadership behaviors by managers and their staff nurses. Kleinman asserted that although studies have shown that effective leadership styles among NMs have been associated with staff nurse job satisfaction and retention, it is not

clear which particular NM leadership behaviors contribute most to staff nurse retention.

In the above study, Kleinman (2004b) found that there was a discrepancy among NMs' perceptions of their leadership styles and staff nurses (SNs) perceptions of their leaders (i.e., NMs). NMs perceived that they demonstrated a high frequency of transformational leadership behaviors, but SNs perceptions did not confirm the NMs' own perceptions. For example, descriptive statistics and student's *t* tests revealed that NMs' own ratings on *attributed idealized influence* (a dimension of transformational leadership) indicated a mean score of 3.2, while SNs' ratings of their NMs' indicated a mean score of 2.6 ($p < 0.01$). However, through correlational analysis, both NMs and staff nurses agreed that the transactional leadership behavior of *active management-by-exception* appears to negatively influence staff nurse retention.

Kleinman (2004b) also suggested that staff nurses who have limited interaction with their NMs have less favorable perceptions of their NMs leadership style. The visibility and contact with the NM is a clearly identified need for nursing staff or subordinates. This is particularly apparent to nurses who are working evening and night shifts. In addition, there is a known disparity between staff nurses ratings versus NMs' self-ratings on the NMs transformational leadership behaviors. Thus, Kleinman recommended that healthcare administrators should develop strategies to explore and explain

this disparity. Additionally, empirical research must be done to support such strategies to better understand the relationship between NMs' leadership styles and nurse retention.

In Canada, Doran et al. (2004) examined how NMs' span of control (i.e., close proximity of the NM to an area of leadership/managerial responsibility) influences nurse, patient and nursing unit outcomes. In addition, they identified which particular leadership style contributes to optimum nurse, patient and nursing unit outcomes under different spans of control. Significant findings in this study include that transformational and transactional leadership styles increase nurses' job satisfaction, while *management-by-exception* and *laissez-faire* leadership styles decrease nurses' job satisfaction. Moreover, transactional leadership style increases patient satisfaction, while transformational leadership style decreases staff turnover.

Furthermore, a NM with a wide span of control decreases the positive effects of transformational and transactional leadership styles on nurses' job satisfaction; but, increases the negative effects of *management-by-exception* and *laissez-faire* on nurses' job satisfaction. While a NM's wide span of control decreases patient satisfaction, the effects of transformational and transactional leadership styles on patient satisfaction in this context, however is positive. Moreover, nurse retention is negatively affected by a NM's wide span of control. Findings of this study also suggest hospital administrators and nurse executives need to carefully examine the NM's span of control and

its implications to nursing work environment and patient care outcomes. The nursing leadership studies discussed above support transformational leadership styles as the preferred leadership styles for NMs in the 21st century healthcare delivery system. Understanding the specific leadership styles utilized by NMs is the first step in better understanding the relationship of these styles or behaviors on organizational culture.

Organizational Culture

According to Denison (2000b), organizational culture pertains to the group's practices and behaviors that exemplify and reinforce them. Organizational culture is a broad, subtle, yet very powerful force, which consists of a pattern of behaviors unique to each work group such as a nursing unit. According to Coeling and Simms (1993a), although work group culture "is based on values, it manifests itself in behavior in the ways people communicate and interact together" (p. 47). Moreover, in a work group culture, cultural behaviors are powerful survival strategies that are embraced strongly by work group members. These behaviors are not necessarily transmitted formally to the new group member; instead, these are inferred from what members of the group say and do, which are not usually obvious to the casual observer or participant (Coeling & Simms, 1993a). However, scholars have long argued that leadership shapes or creates the culture of the organization and vice versa.

Dennison (2000b) asserts that some aspect of organizational culture, including group norms and acceptable behaviors, are visible. For example, Denison explains that behaviors such as “working hard,” “dressing conservatively,” or “acting friendly to customers” are aspects of cultures that are readily visible. Denison further explains that other aspects of organizational culture are abstract or “invisible,” which includes assumptions, values, and core beliefs used within the organization or work group. These aspects of culture are similar to the three levels of organizational culture described by Schein (2004) including: *artifacts*, *espoused values*, and *underlying assumptions*. Artifacts are readily observable aspects of the organizations, while espoused values are tied in with the strategies, goals, and philosophies of the organization. Moreover, the underlying assumptions are best symbolized by statements such as “that’s just the way it is here” (Lachman, 1999, p. 2). Collectively, leaders could effectively or ineffectively embed cultural norms and behaviors in an organization (Schein, 2004). Successful establishment of norms and behaviors in an organization can assist in the drive to enhanced organizational performance.

Similar to leadership, organizational culture is a multidimensional construct that has diverse perspectives from various disciplines, such as anthropology, sociology and organizational psychology (Kratina, 1990; Scott, Mannion, Davies, & Marshall, 2003). Furthermore, Cameron and Quinn (1999) explain that organizational culture comprises a complex, interrelated, comprehensive,

and ambiguous set of factors, in which attempts to include all factors in assessing and diagnosing organizational culture is impossible. However, using an underlying conceptual or theoretical framework (e.g., The Denison's Organizational Culture Model) narrows and focuses the key dimensions of organizational culture (Cameron & Quinn, 1999).

Cameron and Quinn (1999) assert that organizational culture research is complex because it is extremely broad and inclusive in scope. This complexity results in controversies in the literature surrounding approaches to organizational culture research, specifically related to methodology and measurements. For example, Schein (1996) strongly advocates using qualitative research methods in order to gain a comprehensive understanding of the organizational culture. In particular, understanding the organizations' espoused values, beliefs and underlying assumptions that are shared by members of the organization could be achieved through observations and interviews, not by the use of measurement tools such as questionnaires. Conversely, Cooke and Szumal (1993) argue that organizational culture can be measured quantitatively by using measurement tools such as the Denison's Organizational Culture Survey (DOCS). In the field of business, several scholars have advocated quantitative methodology in organizational culture research because it offers investigators a practical approach to investigating a complex phenomenon and also a means by which to reduce the amount of research time and cost (Xenikou & Furnham, 1996). In

conclusion, Scott et al. (2003) suggest that the selection of the measurement tool (e.g., DOCS) should be determined by how organizational culture is conceptualized, which is ultimately explained by the findings of the study. To date, no single theoretical or conceptual framework of organizational culture is comprehensive and superior to others (Cameron & Quinn, 1999).

The Denison's Organizational Culture Model (DOCM)

The DOCM posits four desirable organizational traits grounded by theory and empirical findings. This model is based on the premise of organizational culture research: That the culture of the organization has a significant influence on organizational effectiveness (Denison & Mishra, 1995). According to Denison and Mishra, the four organizational culture traits are characteristic of organizational effectiveness including: adaptability, involvement, consistency, and mission.

The *adaptability trait* refers to the organization's ability to translate the demands of the business environment into action (Block, 2003; Denison, 2000b). This trait also denotes the organization's system of norms and beliefs, which support the organization's capacity to receive, interpret, and translate signals from its operational and competitive environment into internal behavioral changes that increase its chances for survival, growth and development (Denison, 2000b; Rondeau & Wagar, 1999). In the context of nursing, this trait may be used to describe a nursing unit with staff nurses (SNs) who are less resistant to change, flexible and responsive to various

hospital initiatives (e.g., performance improvement efforts) and the overall healthcare delivery system dynamics. SNs also have the understanding of the implications of these behaviors to the bottom-line of the life of their organization – viability in the competitive healthcare market. Furthermore, Denison suggests three aspects of adaptability traits that impact an organization's effectiveness. Such aspects include the ability of the organization to: (1) perceive and respond to the external environment, in which successful organizations tend to be focused on their customers and their competitors; (2) respond to internal customers, regardless of level, department or function; and (3) restructure and re-institutionalize a set of behaviors and processes that allow the organization to adapt - without this ability to implement adaptive response, an organization cannot be effective (Denison, 2000b). By understanding the aspects of the organization's *adaptability*, NMs are better positioned to assess the organization's capability to respond to change and ultimately influence organizational performance.

The *mission trait* reflects the organization's ability to define a meaningful long-term direction that provides employees with a sense of focus and a common vision of the future (Block, 2003; Denison, 2000b). Further, a mission provides purpose and meaning by defining a social role and external goals for the organization. It provides a clear direction and goals that serve to define an appropriate course of action for the organization and its members. A sense of mission allows an organization to shape current behavior by

envisioning a desired future state. Being able to internalize and identify with an organization's mission contributes to both short and long-term commitment to the organization. Organizational success, such as productivity (Rondeau & Wagar, 1999), is more likely to be attained when individuals and organizations are goal directed (Denison, 2000b). Of the four organizational cultural traits, Fisher (2000) found *mission* as the major trait that influenced organizational effectiveness. The primary focus in a nursing unit is the patient and ultimately the satisfaction of that patient with the care delivered. Consequently, patient satisfaction is often a core *mission* trait in nursing units as it is viewed as a key indicator of organizational effectiveness of a particular acute care hospital.

The *involvement trait* is a characteristic of a "highly involved" culture, in which employee involvement is strongly encouraged and creates a sense of ownership and responsibility. Employees rely on informal, voluntary and implied control systems, rather than on formal, explicit, bureaucratic control systems. Out of this sense of ownership grows a greater commitment to the organization and an increasing capacity for autonomy. This implies that employees are more involved and dedicated to positive organizational outcomes. Receiving input from organizational members increases the quality of the decisions and improves their implementation (Denison, 2000b) because of increased collaboration and leveraging of broader operational knowledge. Thus, this cultural trait focuses on employee participation and

empowerment as a response to rapidly changing conditions in the external environment of the organization. Employee satisfaction, commitment and morale are key aspects of organizations with strong involvement culture (Rondeau & Wagar, 1999). As a result, NMs need to be focused on motivating SNs to be engaged and contribute collaboratively in decisions that impact organizational effectiveness.

The *consistency trait* defines the values and systems that are the basis of a strong culture. It provides a central source of integration, coordination and control. Organizations characterized by the consistency trait tend to create internal systems of governance based on consensual support. Such organizations have highly committed employees, key central values, a distinct method of doing business, a tendency to promote from within, and a clear set of appropriate behaviors. Further, this trait creates a "strong" culture based on a shared system of beliefs, values and symbols (internalized values) that are widely understood by members of an organization. Implicit control systems based on internalized values can be a more effective means of achieving coordination and integration than external-control systems (e.g., regulatory reviews or independent audits) that rely on explicit rules and regulations, and becomes particularly apparent when organizational members encounter unfamiliar situations. It enables individuals to better react in a predictable way to an unpredictable environment by emphasizing a few general, value-based principles upon which actions can be grounded (Denison, 2000b).

Furthermore, Rondeau and Wagar (1999) assert that a consistency-based culture values stability and predictability through member compliance with organizational rules and regulations. In addition, organizational roles and hierarchy are strictly enforced and embedded in the cultural values of organizations with strong consistency cultures (Rondeau & Wagar, 1999).

Clearly, NMs must have the knowledge and understanding of these four culture traits in order to better adapt their leadership styles to influence specific changes to drive improved nursing unit performance. Figure 1 illustrates the constructs comprising DOCM.

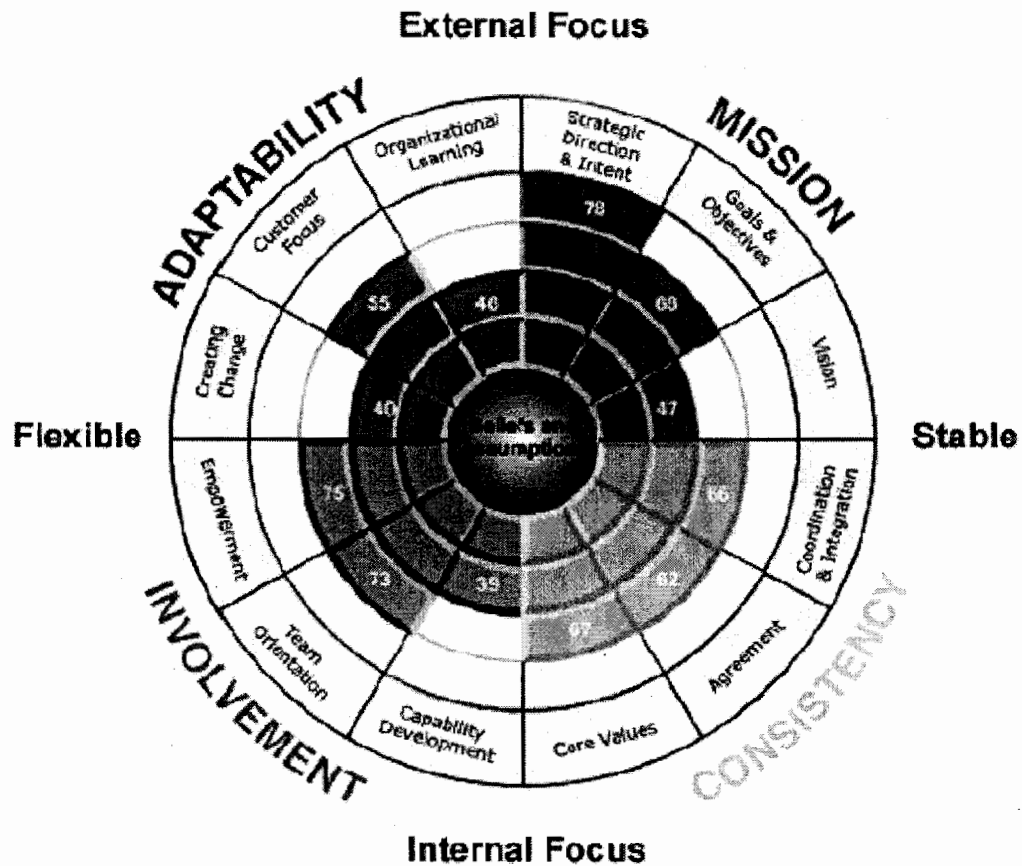


Figure 1. Graphic illustration of The Denison Organizational Culture Model (DOCM).

From "The Denison Consulting Website" by D. Denison, 2005, *The Denison Model*. Retrieved November, 15, 2005, from, <http://www.denisonconsulting.com/dc/Research/DenisonModel/tabid/29/Default.aspx>. Copyright 2000-2005 by the Denison Consulting. Adapted with permission of the author.

According to Denison and Mishra (1995), effective organizations demonstrate high levels of cultural traits, which reflect their ability to balance the dynamic tension between the need for stability and the need for flexibility within the organization. The DOCM postulates that pairs of culture traits denote certain organizational attributes. For example, a pair of *involvement* and *consistency* traits represents internal operational aspects of organizational culture while a pair of *mission* and *adaptability* focuses on the externally-driven aspects of an organizational culture (Block, 2003; Denison, 1997). Moreover, a pair of *involvement* and *adaptability* traits represents the organizations' capacity for flexibility and change, while a pair of *consistency* and *mission traits* is oriented toward stability (Denison, 1997; Denison, 2000b). Thus, the ability of the organization to reconcile such dynamic tensions within the organization is the essence of an effective organizational culture (Dennison, 1997; Dennison & Mishra, 1995).

To date, the DOCM has not been used in nursing organizational culture research. However, this model offers a different perspective in describing or explaining the organizational culture *trait* or *traits* found in nursing units that have shown organizational effectiveness such as consistency in achieving high levels of patient satisfaction and desirable nursing unit organizational outcomes that are tangible to specific acute care hospitals. For example, at Saint Barnabas Health Care System (SBHCS) in New Jersey, a Nursing Report Card (NRC) is used as a means of establishing patient care

benchmarks, thus serving as a tool for measuring and evaluating nursing care outcomes across the healthcare system (Holocek, 2005). The measurement criteria comprising the NRC include recruitment and retention, financial and staffing, quality and satisfaction, and patient safety (SBHCS, 2004). Other examples of nursing unit organizational effectiveness that are more tangible to other acute care hospitals include the achievement of prestigious nursing awards such as the Magnet Nursing Status for Nursing Excellence and the Beacon Award for Critical Care Excellence (Appendix A).

The DOCM is measured by the Denison Organizational Culture Survey (DOCS), which was selected for the present study to measure nursing units' organizational culture. Compared to other quantitative measurement tools, the DOCS possesses the following advantages: (1) it measures group behaviors rather than their personality; (2) it is designed and created within the business environment (i.e., *real world*) rather than within the academic environment; (3) the items are written in business language, thereby is applicable for exploring business-level issues which could be interpreted easily; (4) it measures the link to bottom-line business results; (5) it is fast and easy to implement; and (6) it is applicable to all levels of an organization (Denison, 2000b). The DOCS offers greater potential application in measuring organizational culture and organizational effectiveness of nursing units in acute care hospitals today.

Studies on Nursing Unit Organizational Culture

The study of organizational culture became popular in the 1980s. During this time, business scholars used the concept of *corporate culture* or *organizational culture* to explain the phenomena of economic successes of Japanese over American firms (Lim, 1995; Sleutel, 2000). The Japanese “culture” has been described as a highly motivated workforce with a commitment to a common set of core values, beliefs and assumptions (Lim, 1995). Organizational culture research in healthcare stemmed from this type of inquiry (Vandenberghe, 1999; Wooten & Crane, 2003), and was stimulated by the emergence of managed care (Gershon, et al., 2004). The infiltration of managed care companies had resulted in unprecedented organizational changes in the healthcare delivery system. Such changes included organizational restructuring, reduction in patients’ hospitalization days, budgetary constraints, etc., which negatively affected the employees’ performance and productivity, and patient satisfaction (Gershon, et al., 2004; Wooten & Crane, 2003). Thus, the interest in investigating the relationship of organizational constructs (e.g., organizational culture) and health care services outcomes has increased (Gershon, et al., 2004). However, published research articles specific to nursing unit culture and organizational effectiveness is limited, and to some extent, obscure. Additionally, inconsistencies in the use of terms when referring to a nursing unit organizational culture are common in nursing literature including *climate*,

culture, context, work environment, or work group culture (Seago, 1997; Sleutel, 2000). Furthermore, controversies on methodological and measurement approaches of organizational culture research also exist in nursing literature (Gershon, et al., 2004; Seago, 1997). Despite these issues, research findings suggest a common theme: that organizational culture is linked to organizational effectiveness (Wooten & Crane, 2003).

In those published articles, the majority have used quantitative survey instruments to measure nursing unit organizational culture. For example, the Organizational Culture Instrument (OCI) and Nursing Unit Cultural Assessment Tool (NUCAT) are frequently used tools in measuring organizational culture or work group culture in the hospital (Huber, et al., 2000; Seago, 1997). The OCI is designed to measure normative beliefs and shared behavioral expectations in organizations (Cooke & Szumal, 1993). The OCI provides a point-in-time picture of the culture of the organization in terms of 12 specific types of behavior norms. These *behavioral norms* are the behaviors that all members understand and believe are expected of them if they are to “fit-in” and “survive” within their organizations. These norms are not only evident within the organizations but also within society (Seago, 1997; Scott, et al., 2003; Szumal, 1998). Furthermore, the behavioral norms are associated with three types of cultures. These are (1) *constructive cultures*, in which members are encouraged to interact with others and approach tasks in ways that will help them meet their higher order-satisfaction needs, which

includes achievement, self-actualizing, humanistic-encouraging, and affiliative norms; (2) *passive/defensive cultures*, in which members believe they must interact with people in ways that will not threaten their own security, which includes approval, conventional, dependent, and avoidance norms; and (3) *aggressive/defensive cultures*, in which members are expected to approach tasks in forceful ways to protect their status and security, which includes oppositional, power, competitive, and perfectionists norms (Cooke & Szumal, 1993; Szumal, 1998).

From their recent work in studying the organizational culture of a high performing nurse-midwifery practice, Wooten and Crane (2003) asserted that the understanding of organizational culture is crucial in today's competitive and complex healthcare system that is often associated with decreasing levels of patient satisfaction. They examined an organizational culture of a high quality nurse-midwifery practice within the University of Michigan Health System over a two-year period. Qualitative and quantitative findings showed high levels of patient satisfaction and *constructive* organizational culture. Study participants also described the certified nurse-midwives (CNMs) services with the following overarching themes: *reliability, responsiveness, assurance, and empathy*. Moreover, Wooten and Crane's findings validated the CNMs' practice as a "high performing organization" recognized as being experts in labor/delivery and alternative medical therapies. As a result, the

practice is recognized as a reputable competitor in the local women's health's market, and has experienced increased patient referrals.

Although the setting of the above study is not a typical acute care hospital nursing unit, several implications are derived that support the need for understanding organizational culture in nursing units: (1) Organizational culture is the heart and soul of an organization because it explains a work environment; (2) Nursing leaders should take on the responsibility as the culture gatekeeper (e.g., accessible and visible to staff); and (3) A positive or constructive organizational culture is not dominated by one person, the leader. Healthcare organizations that typify constructive cultures put people first by encouraging interpersonal relationships, but also values self-actualization and employees who are achievement oriented (Wooten & Crane, 2003). Organizations that are more collaborative and inclusive can drive increased organizational effectiveness. In healthcare, this is accomplished by high levels of patient satisfaction.

The Nursing Unit Cultural Assessment Tool (NUCAT) is another *culture* measurement tool that has gained popularity in nursing research in the early 1990s (Coeling & Simms, 1993a). The NUCAT purportedly measures major cultural dimensions and outcomes of the individual and group preferred behavior, rated by respondents as those behaviors that they prefer in comparison to those that typically occur in their unit (Scott et al., 2003; Seago, 1997). Coeling and Simms (1993b) used NUCAT to assess individual

nursing unit group culture in acute care hospitals. Research outcomes were used in guiding NMs in changing nursing unit culture including the implementation of variety of practice patterns such as team nursing, primary nursing, case management, managed care, patient-centered care, assistive personnel, and computer-assisted care. Findings of this study also suggest that the NM must be aware of the cultural *norms* of the nursing unit, and these norms must be addressed before innovation can be implemented in a given nursing unit. Additionally, to be successful in implementing innovations in nursing units, ongoing evaluation and reassessment of nursing unit culture is required. Furthermore, Coeling and Simms (1993b) suggested that “the successful manager will be the one who listens carefully to what unhappy and resisting nurses have to say about an innovation” (p. 20). Thus, the findings of this study support cultural competency as one of the essential skills that NMs must possess to effectively facilitate cultural change in the patient care units, thereby enable nursing staff to be more responsive in the constantly changing healthcare delivery system.

The above study is one of the few published research articles that addressed the use of NUCAT. According to Coeling and Simms (1993a), the NUCAT was mainly intended to identify cultural patterns or behaviors of a specific nursing unit. Coeling hesitated to recommend NUCAT as a means for measuring nursing unit organizational culture quantitatively because its psychometric property is yet to be established (personal communication,

January 13, 2005). Furthermore, a comprehensive evaluation of various organizational culture instruments used in healthcare research has shown that the NUCAT is only appropriate for assessment of professional culture characteristics, but not for organizational culture (Scott, et al., 2003).

Other nursing organizational culture studies included assessment, diagnosis or evaluation of nursing unit cultures. These type of studies were usually carried out prior to, and after implementation of organizational change (Forsythe, 2005; Ingersoll, et al., 2000; Jones & Redman, 2000), performance improvement (Baker et al., 2003) and patient care delivery models (Jones, DeBaca, & Yarbrough, 1997). Investigators in these studies, however, had used various conceptual frameworks in operationalizing the concept of organizational culture, and the research methodologies that were employed also varied. Despite the dissimilarities in the conceptualization and measurement approaches in these studies, the findings suggested that *culture* is indeed a powerful force that influenced organizational initiatives and outcomes.

Ingersoll et al. (2000) conducted a survey to examine the relationships among organizational culture, organizational commitment, and organizational readiness in a hospital undergoing major organizational change. Regression analysis revealed that organizational readiness was the strongest predictor of employees' organizational commitment ($r = 0.53, p < 0.0001$). However, organizational culture was found to have a role in facilitating or inhibiting

organizational change. Thus, the authors suggest that emphasis on organizational culture should be considered in redesigning healthcare delivery process and systems. Similarly, Jones and Redman (2000) examined the organizational culture of three hospitals before and after work redesign. The findings of this study suggest that strong leadership characteristics are needed to promote positive organizational culture, while strong management characteristics are the norm for a negative organizational culture such as in a hierarchical culture. Furthermore, they concluded that failure to identify and manage the organizational culture can have a profound impact on work redesign initiatives and organizational mergers. Thus, the lack of attention to an organization's culture can mean failure for implementing strategic initiatives, and managing change.

Recently, Forsythe (2005) used a qualitative *Cultural Assessment Survey Tool* to identify and implement organizational change in a perioperative area of an acute care hospital. The findings of this study included identification of three overarching themes that described organizational culture: (1) *collaborative* (37%); (2) *individual* (37%); and (3) *unified with a shared vision* (26%). Forsythe interpreted and defined these themes in the context of an organizational work environment. Collaboration "is a shared belief that functions to produce betterment for the whole as a collective force," while in a unified and individual environment, "beliefs are shared, but they reflect individual gain." However, in a collaborative and individual environment,

"beliefs are shared that benefit both the collective and the individual, therefore, betterment is achieved for both entities" (Forsythe, 2005, p. 1293). Based on the finding that a *unified vision* was lacking in the organizational culture of the sample, nurse leaders collectively transformed that culture into a positive organizational culture, described as a *collaborative work* environment. A part of that cultural transformation included the hiring of additional personnel, designing continuous quality improvement programs, and redistribution of staff workload in the perioperative department. According to Forsythe, the achievement of such effective organizational change was brought about by having a baseline understanding of the organizational culture in the perioperative department.

Studies have also shown that problems with organizational culture, lack of or poor team communications, and conflict are significant barriers to performance improvement efforts in the patient care units. Baker et al. (2003) conducted a study using organizational culture surveys prior to the implementation of performance improvement in neonatal intensive care units. Findings of this study suggest that [organizational] culture surveys provide useful information on team and organizational issues that impede improvement, and could also be used as a catalyst for dialogue on issues among team members thereby enabling team members to identify specific areas for improvement such as policies, communications, and relationships among staff that promote more effective team behaviors. Thus, performing

organizational culture assessment is necessary prior to implementation of a unit-based quality improvement or a “rapid-cycle” change where front-line clinical nursing leadership is pivotal (Baker et al., 2003).

Jones et al. (1997) examined the organizational culture of one hospital in the Western United States before and after the implementation of a patient-focused care model. Findings of this study corroborated previously discussed studies, in which hierarchical culture impedes organization change. The patient care units that exemplify hierarchical values were characterized by: command and control orientation, and strong reliance on rules, were the nursing units' values and norms. Jones et al. suggested that these types of patient care units were found to be the contributing factors in problematic change efforts of an organization.

Moreover, organizations that manifest hierarchical cultures negatively impact nurses' quality of work life and nurse retention. Hospitals' hierarchical structures may not be the most conducive environment to enhancing nurses' job satisfaction and organizational commitment (Gifford, 2002). Gifford conducted a survey to study the impact of organizational culture to nurses' quality of work life (QWL) and nurse retention. The QWL measures included the following dimensions: organizational commitment, job satisfaction, empowerment, job involvement, and intent to turnover (Gifford, 2002). The significant outcome of this study suggests that improvement in the nurses' compensation is not the solution to retain nurses in the hospital, but rather

that an improvement in the nurses' quality of work life, such as transforming hierarchical to a positive organizational culture, is a more practical long-term approach that hospitals should adopt in retaining their nurses.

Clearly, the assessment, diagnosis or evaluation of organizational culture is imperative before and after implementation of organizational change, work redesign or performance improvement initiatives. Additionally, despite the existing definitional complexities of organizational culture, studies have shown that hospitals that manifest *positive* organizational cultures enhance nurse retention and organizational outcomes.

Leadership & Organizational Culture

Schein (2004) views the relationship of leadership and organizational culture as shared. Schein argues that culture determines leadership while leadership creates, shapes, and manages culture. Furthermore, Schein asserts that culture is not easy to create or change and that a leader is not the only determinant of a culture. "Culture is the result of a complex group learning process that is only partially influenced by leader behavior. But if the group's survival is threatened because elements of its culture have become maladapted, it is ultimately the function of leadership at all levels of the organization to recognize and do something about this situation" (Schein, 2004, p. 11). For example, one hospital had implemented "skill-mix" bedside caregivers comprised of professional nurses and unlicensed assisted personnel (UAP) to reduce operating cost. Initially, professional staff nurses

had demonstrated resistance to change, particularly in not relinquishing tasks that could be delegated to a UAP. Through effective leadership, education on potential cost-savings of new staffing patterns, staff empowerment and staff understanding about the impact of the staffing change to the viability of the organization; collectively, staff members were able to create a successful and positive culture-shift as demonstrated by their added fiscal accountability to their accountability for quality care that became responsive to the changing forces in healthcare (Esler & Nipp, 2001).

While Schein (2004) suggests leadership and culture are conceptually intertwined, other authors have argued that the leadership-culture relationship is reciprocal (Sarros, Grey, & Densten, 2001) and constant (Bass & Avolio, 1993). According to Bass and Avolio, leaders create and develop characteristics and qualities of an organizational culture which followers eventually adopt. Despite the notion of the blurred relationship of leadership-culture, its impact to organizational outcomes, however, is understood (Block, 2003; Burke & Litwin, 1992; Chen, 2004; Kratina, 1990; Lim, 2001).

McDaniel and Stumpf (1993) conducted a multidimensional study surrounding organizational culture in the context of nursing services (now referred to as patient care services). A part of this study was to profile the culture of acute care hospitals, and examined the relationships between organizational culture and features of nursing services. Findings of this study suggest that constructive cultures tended to have higher transformational

leadership and work satisfaction scores. Although correlations were not high, transformational leadership ($r = .37$), transactional leadership ($r = .18$) and work satisfaction ($r = .35$) were positively correlated with constructive culture in contrast with other culture types such as passive culture, which showed a negative correlation ($r = -.21$). In addition, nurse retention, work support, job satisfaction, "fitting in", job knowledge, and recommending the organization as a good place to work were positively correlated with constructive culture. This study is one of the early studies that supported the importance of understanding organizational culture in the context of nursing services. Outcomes of this study have guided nurse executives and managers in the implementation of work redesign and the empowerment of nursing staff, which are essential in the enhancement of nursing services and patient care outcomes.

In the field of business, Block (2003) explored the nature of the relationship between leadership and organizational culture. Block utilized the full-range leadership theory and Denison's Organizational Culture Model, measured by the Multifactor Leadership Questionnaire (MLQ) 5X and Denison's Organizational Culture Survey (DOCS), respectively. Correlational analysis revealed that employees' perceived levels of transformational leadership ($r = 0.49$ to 0.57) and transactional leadership ($r = 0.21$ to 0.28) were positively related to employees' perception of organizational culture traits ($p = 0.01$). When comparing salaried employees to union employees,

employees rated their supervisors lower on DOCS. In contrast to transactional leadership styles, strong associations among supervisors' transformational leadership ratings and perceived levels of cultural traits (adaptability, involvement, consistency, and mission) were also found. Furthermore, influences of immediate supervisors on employees' perceptions of the organizational culture were found to be greater than all other leadership positions in the organizations. Multiple regression analyses showed that transformational leadership of the immediate supervisor contributed the most to the employee's (union and non-union) perception of the organizational culture. As the number of organizational levels between employees and leaders increased, the leadership-culture link weakened.

One of the limitations of this study was the exclusive use of quantitative methods. Block (2003) recognized that organizations' espoused values and artifacts were difficult to measure by solely relying on quantitative approaches. Thus, the findings of this study were restricted on the self-reported beliefs and attitudes of employees at a particular point in the life of the organization. However, Block argued that leadership and organizational culture represent two realities of organizational life that are closely intertwined. Despite the inherent limitations, results of this study were consistent with both empirical and theoretical work in the leadership-culture literature.

Therefore, cultural leadership competency in the context of nursing practice is an essential element of the “skill set” that a nursing unit manager must possess. To be an effective leader in the current healthcare delivery system, NMs’ must have a full-understanding of the leadership-culture connection. Research has shown that leaders who have used increased transformational leadership behaviors have successfully created organizational cultures that are socially responsible and supportive (Sarros et al., 2001). Thus, to successfully lead the nursing staff in achieving the hospital’s strategic goals at the patient care unit level, NMs must be able to demonstrate an understanding of the influence of their leadership styles or behaviors on the nursing units’ organizational culture. Finally, as leaders, NMs must “walk the talk” and embody organizational values with sincerity (Sproat, 2001).

Summary

While leadership and organizational culture are two important explanatory constructs influencing organizational outcomes or performance, limited research exists in the literature, particularly related to nurse managers in acute care hospitals. In today’s healthcare, nurse managers play a vital role in the implementation of the hospital’s vision, mission, philosophy, goals and core values to the grassroots of patient care – the nursing units. The nurse manager’s leadership is essential in the development and maintenance of nursing unit cultures that positively impact working conditions or work

environment, and organizational outcomes. For example, a nurse manager that practices transformational leadership behaviors creates or shapes and maintains positive nursing unit organizational culture, which in turn, results in improved staff nurse retention, job satisfaction, organizational commitment, productivity and empowerment. These examples of organizational outcomes are essential in achieving quality patient care and patient satisfaction.

To assist aspiring and experienced NMs to be successful in their roles as leaders and change agents in enhancing efficiency of the healthcare delivery system, they must be trained or retrained about the critical impact or “bottom-line” of leadership-culture connection, which is organizational effectiveness. Despite the many citations on leadership and organizational culture and their impact on organizational performance, empirical findings are needed to further explain the relationship of leadership and culture. Therefore, the full-range leadership theory and Dension’s Organizational Culture Model are theoretical models that could be used in explicating the connection of leadership and organizational culture in today’s acute care hospital nursing units.

Whether the Leadership Practice Inventory (LPI) or the Multifactor Leadership Questionnaire (MLQ) is used as a tool in measuring transformational leadership, the literature is clear that nurse managers’ transformational leadership styles have a positive impact on nursing unit organizational outcomes. Furthermore, these studies exemplify the theme of

nursing leadership research in the past decade, in which transformational and transactional leadership theories have guided investigators in studying leadership styles among nurse managers. Future research should use the new version of the MLQ to provide a broader understanding of leadership styles among nurses in the contemporary healthcare, in which new leadership paradigms may be derived. This will result in further expansion of the body of nursing knowledge, and thus serves as a foundation in developing curricula for educating and training students, aspiring and experienced nurse leaders.

Today, quality and cost-effective patient care, patient safety and patient satisfaction occupy the top priorities of healthcare organizations' strategic goals. Alignment of the nursing units' organizational culture with the hospital's strategic plan is essential in the achievement of the hospital's strategic goals and objectives. Moreover, hospital administrators must be cognizant about the influence of organizational culture to nurse retention, particularly in the midst of the current nursing shortage. Research that addresses the aspects of nurses' quality of work life and working conditions, which include organizational culture, is imperative and timely. The Denison's Organizational Culture Survey could be used as a measurement tool for such a purpose, in particular, the tangible "bottom-line" organizational performance measures, which should not be overlooked by nurse leaders and hospital administrators in the current healthcare environment.

Chapter III

METHODS

Design

Descriptive and exploratory correlational designs were selected for this study to: (1) describe the types of NMs' leadership styles and organizational culture of the sample; (2) systematically examine the extent to which the relationship between nursing unit manager's (NM's) leadership style and nursing unit organizational culture takes place; and (3) describe the nature of such a relationship. As Block (2003) suggests, the correlational design is an acceptable starting point for exploring the relationship of leadership and organizational culture, and can also be used in the early stage of developing conceptual or theoretical models (Burns & Grove, 1997).

Variables & Instrumentation

Variable 1: Leadership Style

The non-manipulated independent variable in this study is leadership style as measured by the Multifactor Leadership Questionnaire (MLQ) Form 5X-Short. The MLQ 5X was used in an effort to capture a broader range of leadership styles including transformational, transactional and non-transactional laissez-faire leadership (Avolio & Bass, 2004; Northhouse, 2004). The MLQ had been revised several times over the past two decades to

address the criticism surrounding its component factors and psychometric properties, such as the instability of MLQ factors and multicollinearity among transformational leadership scales (Antonakis, et al., 2003). An extensive psychometric testing with the use of various statistical methods was performed by the original instrument developers and colleagues to add and delete items, which led to the development of the current MLQ version (Antonakis, et al., 2003; Avolio & Bass, 2004).

The MLQ Form 5X-Short contains 45-items, and uses a 5-point 0-4 Likert scale. The anchors used to evaluate the MLQ factors are presented as follows: 0 = not at all, 1 = once in a while, 2 = sometimes, 3 = fairly often, and 4 = frequently, if not always (Avolio & Bass, 2004). Thirty six items represents nine leadership factors and nine items that assess three leadership outcome scales. For the purpose of this study, 36 items were used. These items represent and measure the key aspects of transformational, transactional and non-transactional laissez-faire leadership constructs. Table 1 provides a summary of the key aspects of leadership constructs and offers sample items corresponding to each leadership scale and factor.

The MLQ scales scores are average scores for the items on the scale. The score can be derived by summing the items and dividing the number of items that make up the scale. If an item is left blank, the total for that scale is divided by the number of items answered (Avolio & Bass, 2004). A copy of the MLQ Form 5X- Short instrument is illustrated in Appendix B.

Table 1

Component of Multifactor Leadership Questionnaire Form 5X-Short

Leadership Scales	Leadership Factors	Sample Questions
Transformational Leadership		<i>The Person I am rating...</i>
	Idealized influence (attributed)	<i>Instills pride in me for being associated with him/her. Acts in ways that builds my respect.</i>
	Idealized influence (behavior)	<i>Talks about his/her most important values and beliefs. Specifies the importance of having a strong sense of purpose.</i>
	Inspirational motivation	<i>Talks optimistically about the future. Talks enthusiastically about what needs to be accomplished.</i>
	Intellectual stimulation	<i>Seeks differing perspectives when solving problems. Gets me to look at problems from many different angles.</i>
	Individualized consideration	<i>Spends time teaching and coaching. Treats me as an individual rather than just a member of a group.</i>

Table I (Continued)

Component of Multifactor Leadership Questionnaire Form 5X-Short

Leadership Scales	Leadership Factors	Sample Questions
Transactional Leadership	Contingent reward	<i>The Person I am rating...</i> <i>Provides me with assistance in exchange for my efforts.</i> <i>Expresses satisfaction when I met expectations.</i>
	Management - by - exception (active)	<i>Keep track of all mistakes.</i> <i>Directs my attention toward failures to meet standards.</i>
	Management - by - exception (passive)	<i>Fails to interfere until problems become serious.</i> <i>Waits for things to go wrong before taking action.</i>
Nontransactional Leadership	Laissez-faire leadership	<i>Is absent when needed.</i> <i>Avoids making decisions.</i>

Validity and Reliability of the MLQ 5X

Leadership is a multidimensional construct that can be measured quantitatively. The MLQ offers such a measure: it is based on an elegant conceptual framework; it is substantiated by rigorous research, psychometrically sound, easy to use, and it is widely known in various leadership literature (Antonakis et al., 2003; Avolio & Bass, 2004). The current version of MLQ Form 5X-Short is a valid and reliable instrument that can adequately measure the full-range leadership theory (FRLT) (Antonakis et al., 2003; Avolio & Bass, 2004). Since leadership is a multidimensional construct, Antonakis et al. (2003) suggest that the MLQ will never account for all possible leadership dimensions; however, it serves as a foundation for further research and understanding of new models of leadership.

Over the past two decades, the MLQ had been criticized by several authors for having inadequate discriminant validity among factors comprising the survey (Avolio & Bass, 2004). In recent years, Avolio and Bass conducted a study using a confirmatory factor analysis (CFA) to validate the construct of FRLT measured by the current version of the MLQ. The CFA was based on the MLQ normative data collected throughout the U. S. through the year 2000. Findings included a goodness of fit index (GFI) of 0.92, adjusted GFI of 0.91, confirmatory factor index (CFI) of 0.91, and a root mean squared error of approximation (RMSEA) of 0.05 (Avolio & Bass, 2004). This study corroborated the study by Antonakis et al. (2003) on the validity of the MLQ

(Form 5X-Short) where leadership was observed and evaluated in various contextual conditions. Descriptive and multivariate statistics were used to analyze the data obtained from a sample of 6,525 raters. Findings included a GFI of 0.92, adjusted GFI of 0.91, and a CFI of 0.91 across contextual conditions (gender, levels of leaders, and environment) were found to be significant ($p < 0.01$). Thus, these findings indicate the best theoretical fit of the nine-factor leadership model supporting the construct validity of the full range leadership theory.

Carless (1998) assessed the psychometric property of the older version of the MLQ 5X using a sample of Australian retail bank branch managers and their subordinates ($N = 695$). Carless (1998) reported that the reliability of the MLQ has been consistently strong with a Cronbach alpha of > 0.90 . This version has also shown strong internal consistencies of 0.67 to 0.93 in various nursing studies (Morrison et al., 1997).

The MLQ has been used extensively in various organizations and industries, which have demonstrated stable reliability results. Thus, its administration at all levels of organizations across production, military, and service organizations, such as healthcare (e.g., patient care services), were found to be more suitable (Avolio & Bass, 2004). Additionally, the MLQ has 360° capabilities; it can be used to assess perceptions of the leadership effectiveness of team members, subordinates, supervisors, managers, and executives from many different levels of an organization.

Variable 2: Nursing Unit Organizational Culture

The dependent variable in this study is nursing unit organizational culture as measured by the Denison's Organizational Culture Survey (DOCS). The DOCS is one of the most commonly used tools in measuring organizational culture, which was founded on the theoretical framework of the Denison's Organizational Culture Model (Block, 2003; Denison, 2000b) illustrated in Figure 1. The DOCS purportedly links organizational culture to "tangible bottom-line performance measures," such as profitability, quality, innovation, market share, sales growth, and employee satisfaction (Denison, 2000b).

The DOCS is a 60-item questionnaire, which asks respondents (e.g., employees) to describe their organizational culture using a 5-point Likert scale. The anchors used to evaluate the DOCS items are presented as follows: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = somewhat agree, and 5 = strongly agree. Each cultural trait (involvement, consistency, adaptability, and mission) is measured by three scales or indices, and each scale contains five items (Denison, 2000b; Cho, 2000). Combined responses to items on the three indices comprise each cultural *trait* score and the mean item scores generate *trait* scores (Block, 2003). If an item is left blank, the total for that *trait* score is divided by the number of items answered. Table 2 provides a summary of the component of DOCS, and offers sample items (questions) corresponding to each organizational culture *trait* scale and index.

Table II
 Component of Denison's Organization Culture Survey

Cultural Trait Scales	Indices	Sample Questions
Involvement		<i>In my unit...</i>
	Empowerment	Most employees are highly involved in their work Everyone believes that he or she can have a positive impact.
	Team Orientation	People work like they are a part of a team. Teamwork is used to get work done, rather than hierarchy.
Consistency	Capability Development	Authority is delegated so that people can act on their own. There is continuous investment in the skills of employees.
	Core Values	There is a characteristic management style and a distinct set of management practices. There is an ethical code that guides our behavior and tells us right from wrong.
	Agreement	There is a "strong" culture. It is easy to reach consensus, even on difficult issues.
	Coordination and Integration	Our approach to doing business is very consistent and predictable. It is easy to coordinate projects across different parts of the organization.

Table II (Continued)

Component of Denison's Organization Culture Survey

Cultural Trait Scales	Indices	Sample Questions
Adaptability	Creating Change	<i>In my unit...</i> <i>The way things are done is very flexible and easy to change. New and improved ways to do work are continually adopted.</i>
	Customer Focus	<i>Customer comments and recommendations often lead to changes. Customer input directly influences our decisions.</i>
	Organizational Learning	<i>Innovation and risk taking are encouraged and rewarded. Learning is an important objective in our day-today work.</i>
	Strategic Direction and Intent	<i>There is a long-term purpose and direction. There is a clear mission that gives meaning and direction to our work.</i>
Mission	Goals and Objectives	<i>There is a widespread agreement about goals. People understand what needs to be done for us to succeed in the long run.</i>
	Vision	<i>We have shared vision of what the organization will be like in the future. Leaders have a long-term viewpoint.</i>

The DOCS items were written to address those aspects of culture that had demonstrated links to organizational effectiveness, such as having a shared sense of responsibility, possessing consistent systems and procedures, being responsive to the market place, and having a clear purpose and direction for the organization (Denison & Mishra, 1995; Lawry, 2002). Appendix C illustrates a copy of the DOCS instrument.

Validity and Reliability of the DOCS

The DOCS is a valid and reliable instrument that has been used extensively to measure the culture of various organizations, including healthcare, for nearly two decades (Denison, 2000b). Cho (2000) reported on the psychometric property of the DOCS instrument using a sample of 36,542 raters. Descriptive and multivariate statistical analyses were used to analyze the data. Findings include Coefficient alphas of 0.70 to 0.86 for the 12 indices (scales) and from 0.87 to 0.92 for the 4 culture traits, indicating acceptable levels of consistency within scales (Cho, 2000; Lawry, 2002). Exploratory and confirmatory factor analytic results such as a confirmatory factor index (CFI) of 0.99, suggest a robust construct validity of DOCS scales and items.

Recently, Denison, Janovics and Young (2005) reported on the psychometric property of the DOCS supporting Cho's findings. They used a large and diverse sample of 35,474 raters that had voluntarily completed the DOCS between 1997 and 2001. These data were obtained from an archive consisting of both public and private sector organizations including large

Fortune 100 companies, schools, hospitals, and private small companies. Findings from this study include Coefficient alphas of 0.70 to 0.85 for all scales/indices. Confirmatory factor analysis shows a root mean square of approximation (RMSEA) of 0.048 and CFI of 0.98. This supports the theoretical structure implied by the Denison's Organizational Culture Model (DOCM) and correlations between DOCS ratings and measures of organizational effectiveness. Consequently, a strong link between organizational culture and performance is supported.

Setting

This study was implemented at the following acute care hospitals of the Saint Barnabas Health Care System (SBHCS) in New Jersey: Community Medical Center (CMC), Monmouth Medical Center (MMC), Newark Beth Israel Medical Center (NBIMC), and Saint Barnabas Medical Center (SBMC). Two of these hospitals are located in northern NJ (NBIMC and SBMC), while the other two are located in the southern part of NJ (CMC and MMC). All of these hospitals are affiliated with academic institutions, which provide community and tertiary levels of patient care services, and each has more than a 500-bed capacity. The SBHCS is the largest integrated healthcare delivery system in NJ (SBHCS, 2005) and is currently ranked in the Top 20 Integrated Health Care Network in the Northeast Region (SBHCS, 2006). Additionally, MMC and NBIMC are recipients of the Top 100 Performance Improvement Leaders in the United States awarded by *Solucient*, a leading

national source of healthcare information and products (SBHCS, 2006). Moreover, CMC has been designated Magnet Status for Nursing Excellence by the American Nursing Credentialing Center (Appendix A).

Sample

A convenient sample of 37 nursing unit managers (NMs) and 278 staff nurses (registered nurses) from critical care and non-critical care units of the above referenced acute care hospitals of the SBHCS participated in this study. For a correlational design, this sample size ($N = 278$) is adequate in providing a power of 0.95 and a moderate effect size of $r = 0.25$ in a two-tailed test with an alpha level of 0.01 (Faul & Erdfelder, 1992; Munro, 2001). This alpha level was based on an exploratory study of the relationship of first-line managers' leadership styles and organizational culture in the field of business, which was published recently (Block, 2003). This study focuses on the NMs leadership styles as perceived by staff nurses (SNs), therefore, calculations of power and effect size were specific to the SNs' sample size.

Despite the fact that the sample of this study was drawn from four hospitals, *one underlying assumption* of this study was that the sample represents a population of a single organization (i.e. a healthcare system), in which all members of the organization (e.g., leaders and subordinates) share the same mission and core values. For example, each employee of the SBHCS is expected to know and execute its mission statement, which is

“providing the highest quality of patient care and health education to the community and the region” (SBHCS, 2005).

Procedure

Upon receipt of the research proposal approvals from the Institutional Review Boards of participating hospitals and Seton Hall University, the primary investigator (PI) obtained Nursing Report Card (NRC) data for the nursing units of the four participating hospitals from the Vice-President of Patient Care Services at the corporate office of the SBHCS. A designated staff member of this office assisted the PI in accessing the NRC data. For each of the participating hospitals, NRC data were collected, which included the following nursing units' ratings: (1) recruitment and retention, (2) financial and staffing, (3) patient safety, and (4) quality and satisfaction. The PI reviewed each report card and ensured that the nursing unit had met one of the inclusion criteria such as a documented organizational effectiveness, as demonstrated by *good performance* ratings in the NRC during the first and second quarters of 2006. A *good performance* rating means that the nursing unit has met the healthcare system's benchmark or has demonstrated exceptional performance above the benchmark. Forty (40) nursing units met this specific inclusion criterion.

Upon determination of the eligible nursing units, the PI accessed research participants through the Directors of Nursing Education and Research at each participating hospitals. The directors then appointed individuals as liaisons

between the PI and the nursing units (nurse managers and staff nurses) of each participating hospital. These individuals assisted the PI in contacting the potential study participants (nursing units).

Research packets were prepared and subsequently distributed by the PI to the individual nursing unit via their mail boxes. The packets for the staff nurses contained the following: solicitation letter (Appendix D), informed consent (Appendix E), MLQ Form 5X, DOCS (Appendices B & C), and demographic profile (Appendix F); while the packets for the nursing unit managers (NMs) contained solicitation letter, informed consent, demographic and nursing unit profiles (Appendices G, H & I). In the solicitation letter, the following inclusion criteria were addressed: (1) a nurse manager who has been in his or her position in the same nursing unit for at least 6 months or more; (2) the nursing unit is staffed by 15 or more staff nurses (SNs); and (3) a full-time, a day shift staff nurse that has worked and reported to the same nurse manager for 6 months or more. Night shift SNs were excluded from this study due to the underlying assumption that their interactions with NMs are minimal (Kleinman, 2004b).

Of the 40 NMs who received the packets, 37 agreed to participate, yielding a total of 19 nursing units in the northern part of the state and 18 nursing units in the southern part of the state. A total of 400 research packets for staff nurses were distributed in all of the four participating hospitals (100 per

hospital). Table 3 provides a summary of the number of packets allocated in each hospital.

Table III

Allocation of Research Packets

Hospitals	Nursing Unit Managers	Staff Nurses	Total
North:			
NBIMC	10	100	110
SBMC	9	100	109
South:			
CMC	10	100	110
MMC	8	100	108
Total	37	400	437

Note. NBIMC – Newark Beth Israel Medical Center, SBMC – Saint Barnabas Medical Center
 CMC – Community Medical Center, MMC – Monmouth Medical Center

Data collected from the individual SNs included the Multifactor Leadership Questionnaire (MLQ) Form 5X, Denison's Organizational Culture Survey (DOCS), and demographic profile. These surveys were completed by the SNs before the start of their shifts; this instruction was specified in the solicitation letter. Additional instruction included the following: (1) surveys must be completed in a quiet room (e.g., break room), with the door closed, and free from distraction, and (2) subsequently, completed surveys must be returned to the primary investigator (PI) via the drop box located in the nurses' station.

Data collected from the individual NMs included demographic information and nursing unit profiles. As stated in the solicitation letter for NMs, they were instructed to complete the questionnaire in their offices at their own convenience, and return the completed forms in the drop box located in the nurses' station.

The primary investigator periodically checked the drop box for integrity at a minimum of one day per week. Data collection was terminated one month following the date of the initial distribution of research packets. During weeks 2 and 3, the PI posted reminder notes (Appendix J) in the nurses' lounge informing study participants about the survey completion deadline. At the 30 day mark, the PI retrieved the contents in the drop boxes. Data were entered into the Statistical Package for the Social Sciences (SPSS) Version 14.0 (SPSS, 2005) and saved on a compact disc. The SPSS file and completed forms will be kept in a locked filing cabinet in the PI's primary office at Seton

Hall University until September 2009. The PI is the only individual who has access to all of the research data. All completed forms will be shredded, and the SPSS data base will be destroyed in September 2009.

Protection of privacy and confidentiality were maintained throughout the duration of this study. None of the data file contains personal information of the study participants such as names, address, social security number, and date of birth. Hospital names, study participants, and type of nursing unit information were coded by letters and numbers, example: SBNM001CT (for nursing unit manager - NM) and SRN001CT (for staff nurse - SN). The first two letters were assigned to the hospital's name and the third and fourth letters were assigned to the job title of the participant (NM) or SN (RN). A numeric code was also assigned to each study participant for statistical purposes. The last two letters of the coding system were assigned to the job location of the NM and the SN (e.g., CT stands for cardiothoracic intensive care unit).

Data Analysis

SPSS Version 14.0 (SPSS, 2005) was used for the data analysis. The statistical procedures employed in analyzing the data of this study included descriptive and inferential statistics. Descriptive statistics were used in the summary and presentation of the data through table and graphic format (Munro, 2001). Inferential statistics were used in testing research hypotheses, in which conclusions and inferences were drawn on the probability of the

findings observed in the sample that may also occur in a larger population (Doordan, 1998), such as in various nursing units of acute care hospitals in the region or elsewhere.

The inferential statistical procedures employed in this study included both parametric and non-parametric statistics. According to Doordan (1998), parametric statistics are inferential statistical tests that require specific distributional assumptions for the variable. The level of data measurement is interval or ratio, the values are normally distributed, and the values have equal variation in the population. The parametric statistics used in this study included student's *t* test, zero-order correlations and multiple regressions. Non-parametric statistics are types of inferential statistical tests that require less restrictive distribution assumptions than parametric test statistics, and are often used with nominal, ordinal data, and/or with small sample size (Doordan, 1998). The non-parametric statistic used in this study included a chi-square statistic.

Descriptive Statistics

A descriptive statistical procedure was used in calculating the means, standard deviations, frequency distribution and percentages of the demographic characteristics and nursing units' profiles of the sample. The means, standard deviations, and medians were determined by using descriptive statistics. The data distributions from the Multifactor Leadership Questionnaire (MLQ) 5X and the Denison's Organizational Culture Survey

(DOCS) scale scores (Figures 2 and 3) were calculated and evaluated using descriptive statistics as well.

Inferential Statistics

Parametric Statistics. For years, the use of parametric statistics in analyzing the data obtained from measurement scales such as the MLQ 5X and DOCS has been controversial in the research literature. For example, several investigators have argued that the Likert-type scales should be treated as *ordinal* data, while others argue that such scales should be treated as *interval* data. According to Munro (personal communication, 2005), the author of the textbook titled *Statistical Methods for Health Care Research*, either parametric or non-parametric statistics could be used in analyzing Likert-type scales data, provided the scales met the underlying assumptions of the statistic to be used. For example, parametric statistics assume normally distributed data.

Histogram

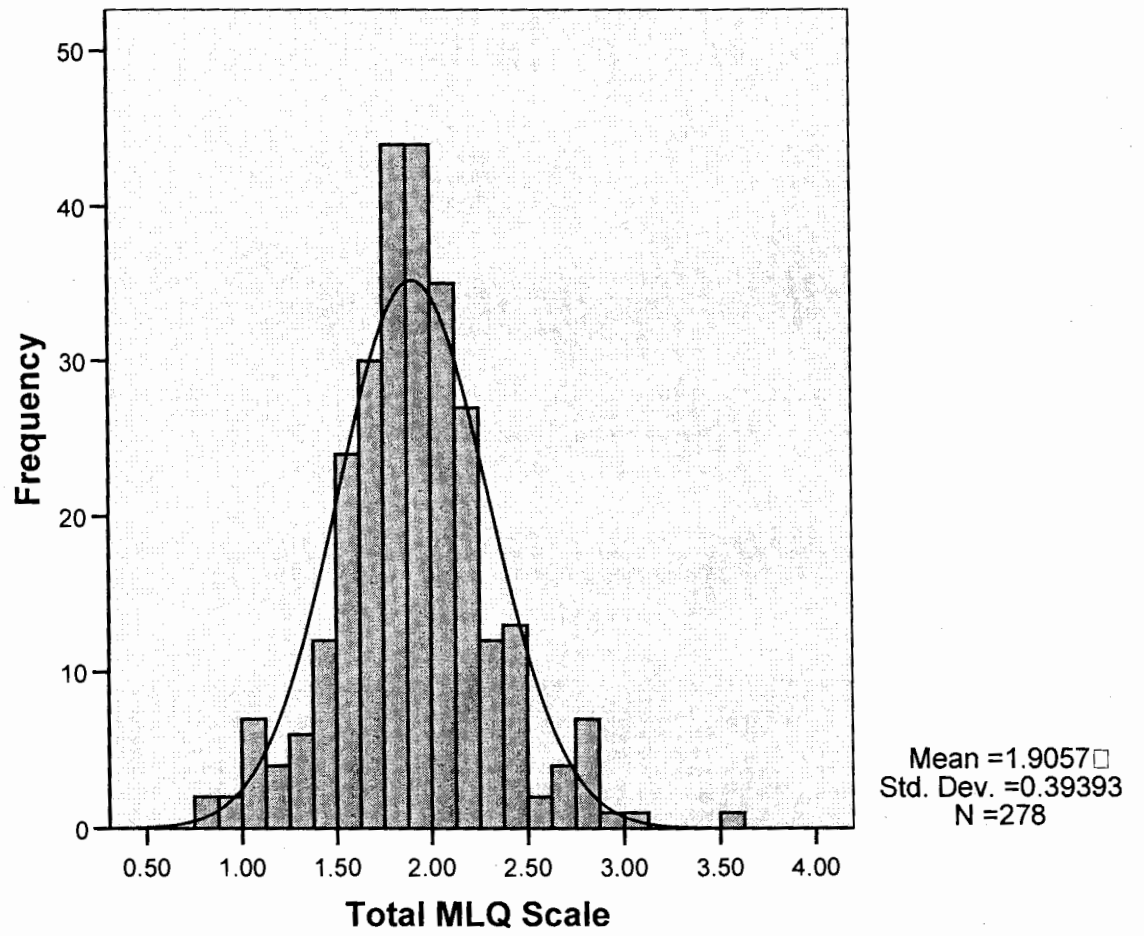


Figure II. Multifactor Leadership Questionnaire (MLQ) 5X data distribution.

Histogram

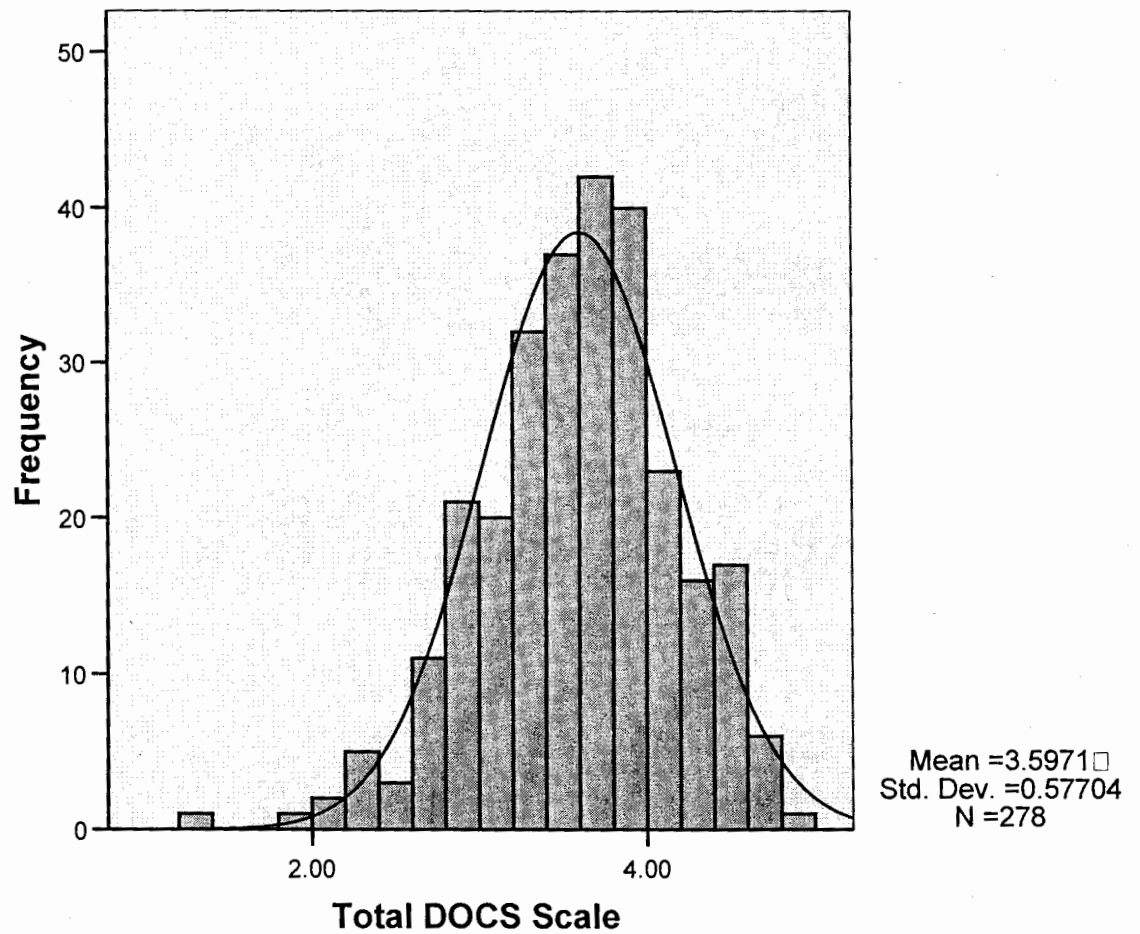


Figure III. Denison's Organizational Culture Survey (DOCS) data distribution.

Munro (personal communication, 2005) emphasized that if the scale scores are severely skewed, then the researcher would either have to transform them or use a non-parametric statistics approach, which are “distribution free,” in that they do not rely on the normal curve. One of the methods often used by researchers in determining the skewness of the data is called the *Pearson’s Skewness Coefficient*, which involves the use of the following formula: $\text{Skewness} = (\text{mean} - \text{median}) \text{ divided by the Standard Deviation (SD)}$. A perfect non-skewed distribution is 0, while -1 or $+1$ SD unit is an acceptable skewness value (Munro, 2001). In this study, MLQ 5X and DOCS scale scores skewness was determined by calculating Pearson’s Skewness Coefficient, which revealed skewness coefficients of 0.02 for MLQ 5X and 0.008 for DOCS. These values suggest that the data of MLQ 5X (Figure 2) and DOCS (Figure 3) scale scores are close to a perfect distribution or within the acceptable range of Pearson’s Skewness Coefficient. Thus, using parametric statistics for analyzing the measurement scales data in this study is justified.

Following determination of the appropriate use of parametric statistics, the four research hypotheses were tested by using correlation, multiple regression and student’s *t* test statistical procedures. A *correlation* or a *zero-order correlation* is a parametric statistic, which is used to measure the relationship between two variables (Munro, 1991). The Pearson product moment correlation coefficient (*r*) is the common method used in quantifying

the relationship between two variables; which may range from +1.00 through 0.00 to -1.00. A +1.00 indicates a perfect positive relationship, 0.00 indicates no relationship, and -1.00 indicates a perfect negative relationship (Munro, 2001). Thus, this statistic was used in determining the existing relationship between nursing unit managers' leadership styles (MLQ 5X scores) and nursing unit organizational culture (DOCS scores) as perceived by their staff nurses.

Upon determining the relationship of the aforementioned variables, multiple regression analyses were performed to determine which specific independent variable (transformational or transactional leadership style) predicts a nursing unit organizational culture characterized by *mission* trait (dependent or criterion variable) as perceived by staff nurses. A *multiple regression analysis* is a parametric statistic, which is used for calculating the equation that describes the direction and strength of the relationship between two or more independent variables and one dependent variable (Doordan, 1998). Also, it is employed if the independent variables can be divided into two sets (Green & Salkind, 2005). In this study, the first set of independent variable consisted of the five transformational leadership factors including (1) idealized influence (attributed), (2) idealized influence (behavior), (3) inspirational motivation, (4) intellectual stimulation, and (5) individual consideration; while the second set of independent variable consisted of the

two transactional leadership factors including (1) management-by-exception (active) and (2) contingent reward.

Hierarchical multiple regression analysis was the method selected for entering variables in the regression equation. The variables may be entered one at a time or in subsets provided a theoretical rationale supports the order of entry (Munro, 2001). In this study, the transformational leadership was the first set of variables entered in the regression equation followed by the transactional leadership set of variables. The rationale for the order of this entry was that transformational leadership had shown a positive correlation with *mission* culture trait (Block, 2003) and linked to various positive organizational outcomes across disciplines (Chapter II).

Interpretation of multiple regression analysis included the understanding of multiple correlation indices such as R , R^2 , adjusted R^2 and change of R^2 . Multiple Pearson's product moment correlation coefficient (R) value ranges from 0 to 1. A value of 0 means that there is no linear relationship between predicted scores (independent variable) and the criterion scores (dependent variable). "A value of 1 implies that the linear combination of the predictor variables perfectly predicts the criterion variable; values between 0 and 1 indicate a less than perfect linear relationship between the predicted and criterion scores" (p. 287), but one of the X s (i.e., independent variables) are useful to some extent in predicting Y (i.e., dependent or criterion variables) (Green & Salkind, 2005). The value R (0 and 1) is then squared and

multiplied by 100, which yield R^2 , interpreted as the percent of the criterion variance accounted for by the linear combination of predictors. However, R^2 is adjusted to correct the overestimation (inflated value) of the population of the sample R^2 . Finally, a change of R^2 is the difference between an R^2 for one set of predictors and an R^2 for a subset of these predictors. The value of the change in R^2 is from 0 to 1 and is interpreted as an increment in the percent of the criterion variance accounted for by including two sets of predictors in a regression equation versus only a single set of predictors (Green & Salkind, 2005).

The student's t test is also a parametric statistic, used to analyze the difference between means of two groups of values to determine whether they are different by chance or another factor (Doordan, 1998). The differences between critical care and non-critical care nursing units in terms of the nursing unit managers' leadership styles and nursing unit organizational culture *traits* as perceived by staff nurses were analyzed by using an independent-sample t test. Moreover, this test was also used in evaluating the differences among demographic variables of nursing unit managers, staff nurses, and types of nursing unit of practice (i.e., profiles of critical care and non-critical care nursing units). Study participants' mean age, years of clinical nursing experience, years of leadership experience, hospital and unit tenure, number of hospital beds and total number of staff nurses were compared. These variables are classified as *continuous variables*, in which a parametric

statistical procedure (i.e., Student's *t* test) is indicated when comparing the differences of the mean values between two groups (Green & Salkind, 2005).

According to Green and Salkind (2005), an independent-sample *t* test is used when comparing the difference between the mean scores of two independent groups, such as critical care versus non-critical care nursing units of the participating acute care hospitals. The *t* test compares whether the mean value of the test variable (e.g., MLQ 5X) for one group differs significantly from the mean value of the test variable for the second group. When conducting a *t* test, it is imperative for the investigator to evaluate and report the equality of the population variances of the two groups, which is accomplished by performing a *Levene's test*. A significant Levene's test indicates that the equality-of-variance assumption is violated. In this instance, the *t* value for unequal variances is essential to provide the readers with accurate information regarding whether variances are equal or homogenous (Green & Salkind, 2005). All independent sample *t* tests performed in this study showed non-significant Levene's tests, which means that the variances of the sample are equal, thus reporting *t* values is not required.

Non-Parametric Statistic

Chi-square statistic (X^2), a type of a non-parametric statistic, is often used to compare the actual number (or frequency) in each group with the expected number, which can be based on theory, experience, or comparison groups (Munro, 2001). This is accomplished by employing a cross-tabulation or chi-

square test of independence (Doordan, 1998). A *one-way* chi-square is used in one sample group involving one variable with several levels, while a *two-way* chi-square is used in more than one sample group involving more than one variable with varying levels (Green & Salkind, 2005).

In this study, a two-way chi-square test of independence involving a cross-tabulation procedure was used in comparing the differences of the counts or frequencies of the *categorical variables* between the critical care and non-critical care groups. These categorical variables included gender, ethnicity, highest educational degree earned, certifications, staffing pattern, staff rotation, leadership training, using unlicensed assistive personnel (UAP), awards and recognition, and celebrations of unit accomplishments. Because of the nature and the level of measurement of these data, the use of chi-square statistic is appropriate.

The significance for all statistical analysis was set at the 0.01 level (alpha) to minimize the significant results that were due to chance. The statistical procedures employed in analyzing the data in this study are appropriate to the levels of measurement and distribution of the data, research questions, hypotheses and research design.

Chapter IV

RESULTS

Characteristic of the Sample

Nursing Unit Managers

All 37 nursing unit managers who consented to participate in this study returned the surveys. The nursing unit managers (NMs) were primarily Caucasian (75.7%) females (94.6%), with a mean age of 45.7 years and a standard deviation (SD) of 8.7 years. They were experienced clinicians ($M = 21.9$ years, $SD = 8.9$ years) and leaders ($M = 9.2$ years, $SD = 7.2$ years). Additionally, they have been employed in the same hospital and have been in the same nursing unit for several years; with a mean hospital tenure of 8.8 years ($SD = 7.4$ years) and a mean nursing unit tenure of 12.1 years ($SD = 7.4$ years). The majority (40.5%) of the NMs had baccalaureate degrees, 37.8% had masters' degrees in nursing or in other field, 13.5% had associate degrees in nursing and the remaining 8.1% had diplomas in nursing. Almost all (90%) of the non-baccalaureate prepared NMs had indicated that they were in the process of completing baccalaureate degrees at the time of data collection. Furthermore, most (64.9%) of the NMs were specialty certified in critical care nursing (18.9%), nursing administration (16.2%) and medical-surgical nursing (13.5%).

When asked about the type of leadership training they had completed, the majority of the NMs had completed formal leadership training within one year (83.8%) and greater than one year ago (73%). The frequently cited leadership training they had attended included the following topics offered by the Saint Barnabas Health Care System (SBHCS): *Core Management and Leadership Program, Leadership in New Millennium, Exceptional People and Exceptional Leaders, and Leading through Vision*. Almost half of the NMs (48%) indicated that they kept themselves updated on the current trends and issues surrounding nursing leadership and management, through continuing education seminars and symposia offered by various healthcare and nursing leadership/executive organizations as well as academic institutions.

All demographic variables, both continuous and categorical, were further examined according to the nursing unit managers' areas of practice: critical care and non-critical care units. Of the 37 NMs, eighteen (18) were in critical care and nineteen (19) in non-critical care units. By using an independent-sample *t* test, no significant differences were found between the two groups in terms of the following demographic variables: age, leadership and clinical experience, hospital and nursing unit tenure (Table 4). Furthermore, using a chi-square test of independence, no significant differences were also found between the two groups in terms of the counts/frequency distributions of the following categorical variables: gender, ethnic background, education, specialty certification, and leadership training (Table 5).

Staff Nurses

Of the 400 staff nurses (SNs) who received the research packets, 278 consented to participate in this study, and returned the surveys. This response yielded a return rate of 69.5%. The majority of the SNs were Caucasian (54.3%) females (91%), with a mean age of 40.9 years and a standard deviation (SD) of 10.2 years. Of the ethnic minority groups in this study, Asians (30.2%) were highly represented when compared to African-Americans (5.8%), Hispanics (3.2%) and Native Americans (0.4%). The SNs' mean number of years of clinical experience was 14.8 ($SD = 10.3$) while the SNs' length of employment revealed a mean of 7.9 years ($SD = 6.8$) in the nursing units and 10.3 years ($SD = 8.2$) in the hospitals. The majority (59%) of the SNs had baccalaureate degrees, 21.6% had associate degrees, 12.9% had diplomas in nursing, and a small percentage (4.7%) had masters' degrees. With regard to specialty certifications, less than half (39%) of the SNs were certified. The types of certifications frequently cited by the SNs included medical-surgical (18.7%), critical care (11.9%), oncologic (4.3%), pediatric (2.2%), post-anesthesia (1.1%) and progressive care (0.7%) nursing.

Table IV

Nursing Unit Managers' Demographics (N = 37)

Characteristic	Critical Care (N = 18)		Non-Critical Care (N = 19)		p
	Mean	SD	Mean	SD	
Age	47.4	8.7	43.9	8.5	.224
Years of clinical experience	23.8	7.8	20.0	9.7	.197
Years of leadership experience	7.5	6.3	10.8	7.8	.172
Years in same nursing unit	9.1	9.1	8.5	5.6	.811
Years in same hospital	12.0	11.1	12.2	8.1	.945

Note. SD – Standard Deviation (\pm) values. Significant differences of group means were calculated at the at the 0.01 level (two-tailed *t*-test).

Table V

Nursing Unit Managers' Demographics: Frequency Distribution (N = 37)

Characteristic	Critical Care	Non – Critical Care	χ^2	<i>p</i>
	(N = 18)	(N = 19)		
Gender (%)			.002	.969
Male	5.6	5.3		
Female	94.4	94.7		
Ethnic Background (%)			1.17	.291
African – American	-	5.3		
Asian	16.7	21.1		
Caucasian	83.3	68.4		
Hispanic	-	5.3		
Specialty Certification (%)			1.33	.248
Certified	55.6	73.7		
Not Certified	44.4	26.3		

Note. Significant differences in frequency distributions were tested at the 0.01 level.

Table V (Continued)

Nursing Unit Managers' Demographics: Frequency Distribution (N = 37)

Characteristic	Critical Care	Non – Critical Care	X^2	<i>p</i>
	(<i>N</i> = 18)	(<i>N</i> = 19)		
Highest Educational Degree (%)			1.360	.507
Diploma in Nursing	5.6	10.5		
Associate Degree in Nursing	11.1	15.8		
Bachelors Degree in Nursing	44.4	26.3		
Bachelors Degree in other field	5.6	5.3		
Masters Degree in Nursing	16.7	31.6		
Masters Degree in other field	16.7	10.5		
Formal leadership training: (%)				
Within 1 year	83.3	84.2	.005	.942
No training within 1 year	16.7	15.8		
Beyond 1 year	83.3	63.2	2.307	.129
No training beyond 1 year	11.1	31.6		
No response	5.6	5.3		

Note. Significant differences in frequency distributions were tested at the 0.01 level.

Demographic variables of all of the staff nurses' (SNs) were further examined according to their areas of practice: critical care and non-critical care units. Of the 278 SNs, 148 were in critical care and 130 in non-critical care. The continuous variables of age, years of clinical experience, nursing unit and hospital tenure were evaluated for the presence of differences. By using an independent-sample *t* test, significant differences in terms of clinical experience and hospital tenure were found between two groups. Critical care nurses had more clinical nursing experience ($M = 16.3$ years) when compared to non-critical care nurses ($M = 13.1$ years). Additionally, critical care nurses had more years of employment in the current hospital where they work ($M = 11.5$ years) than non-critical care nurses ($M = 8.9$ years). However, no significant differences ($p > 0.01$) were found between groups in terms of age and years of employment in the nursing unit of the hospital where they currently work (Table 6). Finally, by using a chi-square test of independence, no significant differences were found between the two groups in terms of the counts/frequency distributions of the following categorical variables: gender, ethnic background, specialty certification, and education (Table 7).

Table VI

Staff Nurses' Demographics (N = 278)

Characteristic	Critical Care (N = 148)		Non – Critical Care (N = 130)		p
	Mean	SD	Mean	SD	
Age	41.0	10.2	40.9	10.4	.950
Years of clinical experience	16.3	10.4	13.1	9.9	.012*
Years in same nursing unit	8.6	7.1	7.0	6.4	.056
Years in same hospital	11.5	8.6	8.9	7.5	.009*

Note. SD – Standard Deviation (\pm) values. *Difference is significant at the 0.01 level (two-tailed t-test).

Table VII

Staff Nurses' Demographics: Frequency Distribution (N = 278)

Characteristic	Critical Care	Non – Critical Care	χ^2	<i>p</i>
	(N = 148)	(N = 130)		
Gender (%)			.293	.588
Male	6.8	8.5		
Female	91.9	90.0		
No response	1.4	1.5		
Ethnic Background (%)			4.546	.474
African – American	4.1	7.7		
Asian	28.4	32.3		
Caucasian	58.8	49.2		
Hispanic	3.4	3.1		
Native American	-	.8		
Other	2.7	3.8		
No response	2.7	3.1		

Note. Significant differences in frequency distributions were tested at the 0.01 level.

Table VII (Continued)

Staff Nurses' Demographics: Frequency Distribution (N = 278)

Characteristic	Critical Care	Non – Critical Care	X^2	<i>p</i>
	(N = 148)	(N = 130)		
Specialty Certification (%)			1.842	.175
Certified	42.6	34.6		
Not certified	57.4	65.4		
Highest Educational Degree (%)			1.630	.443
Diploma	13.5	12.3		
Associate. Degree	17.6	26.2		
BSN	59.5	51.5		
BS/BA	2.7	3.8		
MSN	3.4	3.1		
MA/MS Non-Nursing	.7	1.5		
Dual Masters Degree	.7	-		
No response	2.0	1.5		

Note. BSN – Bachelor of Science in Nursing, BS/BA – Baccalaureate degree in other field, MSN – Master of Science in Nursing, MA/MS – Masters' degrees in other field. Significant differences in frequency distributions were tested at the 0.01 level.

Profiles of Nursing Units

Critical Care Units. The mean number of beds and SNs for the critical care units of the sample were 23.4 ($SD = 13.3$) and 38.3 ($SD = 27.4$), respectively. Almost all (83.3%) of SNs in the critical care units work 12-hour shifts. A majority (66.7%) of these units do not rotate their SNs to either day or night shift. Moreover, 94% of the critical care units had nurse-to-patient ratio of 1:1 to 1:4, which varied according to the level of patient acuity. A high number (72.2%) of these units utilize unlicensed assistive personnel (UAP), such as nursing assistants or patient care technicians. The typical job description of these personnel consist of the provision of physical care of patients, assistance to patient ambulation and transfers and executing errands to other department, etc.

Of the 18 critical care nursing units, 10 (55.6%) were recipients of various awards and recognitions, particularly related to being consistently ranked as *top 3 highest in-patient satisfaction* scores among the hundreds of nursing units in the healthcare system. In this regard, the majority of the critical care nursing unit managers (88.9%) indicated that such accomplishment is usually celebrated, by providing both day and night shifts nursing staff with breakfast, lunch or dinner, recognition notes, and gift certificates.

Non-Critical Care Units. The mean number of beds and SNs for the non-critical care units of the sample were 26.5 ($SD = 10.8$) and 32.8 ($SD = 20.2$), respectively. All SNs in the non-critical care units work 12-hour shifts, and a

majority (89.5%) of these units do not rotate their SNs to either day or night shift. The nurse-to-patient ratio in the non-critical care units varied from 1:4 (15.8%) to 1:5 - 1:8 (78.9%), and up to 1:9 (5.3%) depending on the patients' level of acuity. All of these units utilize UAP.

Of the 19 non-critical care nursing units, 13 (68.4%) were recipients of various awards and recognitions, similar to that of the critical care units. A majority of the non-critical care nursing unit managers (89.5%) had also indicated that such accomplishment is usually celebrated, similar to that of the critical care counterparts.

Differences between the critical care and non-critical care nursing unit profiles were also evaluated. Of the several features of nursing units, both continuous and categorical variables, the nurse-to-patient ratio and utilization of UAP showed significant differences in terms of the counts/frequency distributions. By using a chi-square test of independence, it was observed that non-critical care units had higher nurse-to-patient ratio (1:4 to 1:9) when compared to critical care units (1:1 to 1:4), $\chi^2(1, N = 37) = 25.8, p = .000$. Additionally, non-critical care units utilized more UAP (100%) in comparison to critical care units (72.2%), $\chi^2(1, N = 37) = 6.10, p = 0.013$. No significant differences ($p > 0.01$) were found in terms of the mean number of beds and SNs. Also, no significant differences ($p > 0.01$) were also found in terms of the counts/frequency distributions of staffing patterns, staff rotations, nursing unit awards and celebrations of nursing unit accomplishments.

Results of the Tests of Hypotheses

Hypothesis 1: There is an existing relationship between nursing unit managers' leadership styles and nursing unit organizational culture as perceived by staff nurses.

Scores for nursing unit managers' leadership styles were obtained by calculating the global transformational ($M = 2.8$, $SD = .83$), transactional ($M = 2.1$, $SD = .47$), and laissez-faire ($M = .83$, $SD = .90$) scores on the Multifactor Leadership Questionnaire (MLQ) 5X rated by their staff nurses. These leadership scores were correlated with the staff nurses ratings on their nursing unit organizational culture, which was obtained by calculating the global score ($M = 3.6$, $SD = .58$) on the Denison Organizational Culture Survey (DOCS) instrument.

The results of the correlational analyses demonstrated that statistically significant correlations existed between leadership and organizational culture variables. Transformational leadership showed a positive, moderately strong correlation with organizational culture ($r = .60$, $p = .000$), while transactional leadership showed a positive, but little or weak correlation with organizational culture ($r = .16$, $p = .006$). Conversely, laissez-faire leadership showed a negative correlation with organizational culture ($r = -.34$, $p = .000$).

As discussed previously, *Hypothesis 1(H1)* was expanded into three sub-hypotheses to further examine the nature of the relationship of leadership-culture phenomena in nursing units. This was accomplished by determining

which nursing unit manager's leadership style is strongly associated with the nursing unit's organizational culture in the context of the external and internal environmental attributes explained by the Denison's Organizational Culture Model described in Chapter II. Thus, correlations were computed based on the mean scores of the following: (1) three *leadership scales* (transformational, transaction, and laissez-faire), (2) five *leadership factors* (idealized influence (attributed), idealized influence (behavior), inspirational motivation, intellectual stimulation, and individual consideration), and (3) four *organizational culture traits* (mission, adaptability, involvement, and consistency). The results of the correlational analyses for the three sub-hypotheses are discussed below.

H1a: Staff nurses' (SNs) perceptions of their nursing units' organizational culture in terms of mission and adaptability are positively associated with the level of their nursing unit manager's transformational leadership. The results of the correlational analyses presented in Table 8 showed that transformational leadership scale and factors were all positively correlated with *mission* and *adaptability*; all correlations were significant at the 0.01 level.

Table VIII

Correlations Between Transformational Leadership and Organizational Culture Traits As Perceived by Staff Nurses (N = 278)

Leadership Scale & Factors	Mission		Adaptability	
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
Transformational Leadership	.49	.000*	.51	.000*
Idealized influence (attributed)	.44	.000*	.46	.000*
Idealized influence (behavior)	.40	.000*	.44	.000*
Inspirational motivation	.49	.000*	.46	.000*
Intellectual stimulation	.46	.000*	.48	.000*
Individualized consideration	.43	.000*	.43	.000*

Note. *Correlation is significant at the 0.01 level (two-tailed).

H1b: Staff nurses' (SNs) perceptions of their nursing units' organizational culture in terms of involvement and consistency are positively associated with the level of their nursing unit manager's transformational leadership. The results of the correlational analyses presented in Table IX showed that transactional leadership scale was positively correlated, but showed little or weak correlations with *involvement* ($r = .16, p < 0.01$) and *consistency* ($r = .19, p < 0.01$). However, of the three leadership factors, *contingent reward* showed positive, moderate strong correlations with *involvement* ($r = .51, p < 0.01$) and *consistency* ($r = .54, p < 0.01$) while *management-by-exception (passive)* showed negative correlations with *involvement* ($r = -.34, p < 0.01$) and *consistency* ($r = -.41, p < 0.01$). Moreover, *management-by-exception (active)* showed a positive, weak or little correlation with *consistency* ($r = .15, p < 0.01$); however, no correlation with the *involvement* ($r = 0.07, p > 0.01$) trait.

Table IX

Correlations Between Transactional Leadership and Organizational Culture Traits As Perceived by Staff Nurses (N = 278)

Leadership Scale & Factors	Involvement		Consistency	
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
Transactional Leadership	.16	.008*	.19	.001*
Contingent reward	.51	.000*	.54	.000*
Management-by-exception (active)	.07	.249	.15	.012*
Management-by-exception (passive)	-.34	.000*	-.41	.000*

Note. *Correlation is significant at the 0.01 level (two-tailed).

H1c: *Staff nurses' perceptions of their nursing units' organizational culture in terms of mission, adaptability, involvement and consistency are negatively associated with the level of their nursing unit managers' laissez-faire leadership.* The results of the correlational analyses showed significant, negative correlations, between laissez-faire leadership scale and four culture traits: *mission* ($r = -.30, p = .000$), *adaptability* ($r = -.28, p = .000$), *involvement* ($r = -.28, p = .000$) and *consistency* ($r = -.34, p = .000$).

Hypothesis 2: *Regardless of the nursing units of practice (critical care versus non-critical care), transformational leadership is the strongest predictor of a nursing unit organizational culture characterized by the mission trait.*

Two hierarchical multiple regression analyses were conducted to predict the nursing unit organizational culture characterized by the *mission* trait from two sets of predictors: (1) *transformational leadership* (idealized influence (attributed), idealized influence (behavior), inspirational motivation, intellectual stimulation, and individual consideration) and (2) *transactional leadership* (contingent reward and management-by exception: active). The first multiple regression analysis included the five transformational leadership predictors. The regression equation with the transformational leadership measures was significant, $R^2 = .26$, adjusted $R^2 = .24$, $F(5, 265) = 18.36, p = .000$. The regression equation with the transactional leadership measures was also significant, $R^2 = .21$, adjusted $R^2 = .20$, $F(2, 268) = 35.24, p = .000$. Based on

these results, the transformational leadership measure, however, appeared to be the stronger predictors of *mission* trait.

The second multiple regression analysis was conducted with all seven predictors described above. The linear combination of the seven measures, however, was significantly related to the *mission* trait, $R^2 = .26$, adjusted $R^2 = .24$, $F(7, 263) = 13.13$, $p = .000$. Both predictors appeared to be significant; however, the transformational leadership measures predicted significantly greater than the transactional leadership measures, R^2 change = .051, $F(5, 263) = 3.61$, $p = .004$; the transactional leadership measures predicted less additional variance over and above the transformational leadership measures, R^2 change = .002, $F(2, 263) = .31$, $p = .735$. Based on these results, the transactional leadership measures offer no predictive power beyond that contributed by knowledge of transformational leadership measures. Tables 10 and 11 provide the hierarchical multiple regression model summaries of the two sets of leadership scales and factors as predictors for nursing unit organizational culture characterized by *mission* trait.

Table X
 Multiple Regression Analysis 1: Nursing Unit Managers' Leadership Styles as Predictors of Nursing Unit Organizational Culture Characterized by "Mission" Trait (N =278)

Model	R	R ²	Adj. R ²	SE of the Estimate	Mission			df 2	Sig. F change
					R ² change	F change	df 1		
1	.507 ^a	.257	.243	.57955	.257	18.359	5	265	.000
2	.509 ^b	.259	.239	.58107	.002	.308	2	263	.735

Note. Model 1 = Transformational Leadership, Model 2 = Transactional Leadership, SE – Standard Error.
^a Predictors: (Constant), Individual consideration, Idealized influence (behavior), Idealized influence (attributed), Inspirational motivation, Intellectual stimulation.
^b Predictors: (Constant), Individual consideration, Idealized influence (behavior), Idealized influence (attributed), Inspirational motivation, Intellectual stimulation, Management by exception (active), Contingent reward.

Table XI

Multiple Regression Analysis 2: Nursing Unit Managers' Leadership Styles as Predictors of Nursing Unit Organizational Culture Characterized by "Mission" Trait (N = 278)

Model	R	R ²	Adj. R ²	SE of the Estimate	Mission			df 2	Sig. F change
					R ² change	F change	df 1		
1	.456 ^a	.208	.202	.59502	.208	35.240	2	268	.000
2	.509 ^b	.259	.239	.58107	.051	3.605	5	263	.004

Note. Model 1 = Transactional Leadership, Model 2 = Transformational Leadership, SE = Standard Error.

^a Predictors: (Constant), Management by exception (active), Contingent reward.

^b Predictors: (Constant), Management by exception (active), Contingent reward, Inspirational motivation, Idealized influence (attributed), Idealized influence (behavior), Intellectual stimulation, Individualized consideration.

Further evaluation of the outcome of the multiple regression analyses revealed that of the five transformational leadership variables, *inspirational motivation* was most strongly related to the *mission* culture trait. The strength of the bivariate correlations between the *inspirational motivation* and *mission* ($r = .49, p = .005$) as well as the comparable correlation partialling out the effects of the other four measures such as *idealized influence* (attributed), *idealized influence* (behavior), *intellectual stimulation* and *individual consideration* ($r = .17, p = .005$) support the conclusion. None of the two transactional leadership measures (contingent reward and management-by-exception: active) showed significant contribution to transactional leadership as predictor for *mission* trait.

Hypothesis 3: There will be a difference in leadership styles between critical care and non-critical care nursing unit managers as perceived by staff nurses.

An independent-sample *t* test was conducted to evaluate the hypothesis that critical care and non-critical care nursing unit managers have different leadership styles. Non-critical care staff nurses rated their nursing unit managers significantly higher than the critical care staff nurses in relation to nursing unit managers' transformational leadership styles ($M = 2.96$ versus $M = 2.61, p < 0.01$). Although the differences in the mean scores of the critical care and non-critical nursing unit managers on *idealized-influence* (behavior) were not significant at the 0.01 level ($p = .045$), non-critical care nursing unit managers, however, consistently rated with higher scores by their staff nurses

than their critical care counterparts on all transformational leadership factors (Table 12).

Furthermore, no significant difference was found between critical care and non-critical care nursing unit managers in terms of transactional leadership styles, as perceived by their staff nurses. Non-critical care nursing unit managers, however, tended to display *contingent reward* more frequently ($M = 3.01$) than critical care nursing unit managers ($M = 2.69$), $p < 0.01$. Interestingly, critical care staff nurses rated their nursing unit managers slightly higher in terms of *management-by-exception (passive)* ($M = 1.20$) and *laissez-faire* leadership ($M = .97$) than the non-critical care staff nurses ratings on their nursing unit managers' *management-by-exception (passive)* ($M = .90$) and *laissez-faire* leadership ($M = .68$). All of these correlations were significant at the 0.01 level (Table 12).

Table XII

Differences in Nursing Unit Managers' Leadership Styles As Perceived by Staff Nurses (N = 278)

Leadership Styles	Critical Care (N = 148)		Non-Critical Care (N = 130)		p
	M	SD	M	SD	
Transformational Leadership	2.61	.84	2.96	.81	.000*
Idealized influence (attributed)	2.68	.97	3.04	.94	.002*
Idealized influence (behavior)	2.61	.86	2.82	.89	.045
Inspirational motivation	2.86	.86	3.16	.85	.004*
Intellectual stimulation	2.50	.96	2.84	.85	.002*
Individual consideration	2.40	1.07	2.94	.93	.000*
Transactional Leadership	2.05	.50	2.16	.46	.075
Contingent reward	2.69	.93	3.05	.91	.001*
Management-by-exception (active)	2.28	.94	2.53	.96	.026
Management-by-exception (passive)	1.20	.94	.90	.85	.006*
Laissez-faire Leadership	.97	.95	.68	.86	.009*

Note. *Difference is significant at the 0.01 level (two-tailed *t* - test).
SD – Standard Deviation (±) values.

Hypothesis 4: There will be a difference in organizational culture between critical care and non-critical care nursing units in acute care hospitals as perceived by staff nurses.

An independent-sample *t* test was conducted to evaluate the hypothesis that critical care and non-critical care nursing units have different perceptions of their nursing organizational cultures. The results on Table 13 showed significant differences ($p < 0.01$) between two groups on global organizational culture score (DOCS) as well as on all four culture traits: involvement, consistency, adaptability, and mission. Although, the differences in the mean scores of the two groups on the following culture indices *team orientation*, *organizational learning* and *strategic direction and intent* were not significant ($p > 0.01$); non-critical care staff nurses consistently rated their nursing units higher than their counterparts across all four cultural traits and indices measures.

Table XIII

Differences in Nursing Unit Organizational Culture As Perceived by Staff Nurses (N = 278)

DOCS Scales & Indices	Critical Care (N = 148)		Non-Critical Care (N = 130)		p
	M	SD	M	SD	
Global DOCS score	3.49	.54	3.72	.60	.001*
Involvement	3.60	.74	3.87	.70	.002*
Empowerment	3.61	.82	3.89	.74	.003*
Team Orientation	3.71	.89	3.97	.86	.017
Capability Development	3.48	.80	3.76	.74	.002*
Consistency	3.50	.59	3.73	.62	.002*
Core Values	3.84	.69	4.09	.75	.005*
Agreement	3.45	.72	3.69	.67	.005*
Coordination & Integration	3.18	.67	3.45	.68	.001*

Note. *Difference is significant at the 0.01 level (two-tailed *t* - test), DOCS – Denison's Organizational Culture Survey, SD – Standard Deviation (\pm) values.

Table XIII (Continued)

Differences in Nursing Unit Organizational Culture As Perceived by Staff Nurses (N = 278)

DOCS Scales & Indices	Critical Care (N = 148)		Non-Critical Care (N = 130)		p
	M	SD	M	SD	
Adaptability	3.43	.54	3.67	.58	.001*
Creating Change	2.95	.67	3.26	.67	.000*
Customer Focus	3.78	.62	3.97	.66	.014*
Organizational Learning	3.56	.72	3.75	.70	.022
Mission	3.43	.63	3.61	.70	.014*
Strategic Direction & Intent	3.60	.72	3.75	.70	.162
Goals & Objectives	3.48	.67	3.74	.80	.006*
Vision	3.18	.70	3.39	.70	.012*

Note. *Difference is significant at the 0.01 level (two-tailed *t* - test), DOCS – Denison's Organizational Culture Survey, SD – Standard Deviation (\pm) values.

Chapter V

DISCUSSION

General Discussion of Study Findings

This exploratory correlational study was conducted using a convenient sample of nursing unit managers (NMs) and staff nurses (SNs) from the four major acute care hospitals of The Saint Barnabas Health Care System (SBHCS) in New Jersey. The return of completed surveys was adequate to achieve a strong statistical power and a moderate effect size. The majority of the NMs and SNs were females (> 90%) and Caucasians (NMs > 78%, SNs > 58%), which is reflective of the gender and race composition of the nursing profession in the United States, and is consistent with the sample reported in several related studies (McDaniel & Stumpf, 1993; McGuire & Kennerly, 2006; Ohman, 2000). Thus, no further analysis was required on the disparity of the sample composition in this study concerning gender and race/ethnicity.

Most of the published data on nursing leadership and organizational culture research do not provide differentiation of the study participants' areas of practice. This study addressed this gap of knowledge by further analyzing the data into two categories: critical care versus non-critical care units. However, the aggregation of the data in accordance to nursing unit of practice provides a wider perspective on the meaning and interpretation of the study

findings. No significant differences were found in the demographic characteristics of the NMs in critical care and non-critical care units. However, SNs in the critical care units were found to have more years of clinical experience than the SNs in the non-critical care units. Additionally, critical care SNs had longer hospital tenure than the SNs in non-critical care units. These significant differences may be explained by the career trajectory of a novice professional nurse in the acute care settings. Through personal experience, the typical novice nurse tends to gain clinical experience in non-specialized nursing unit first before seeking employment in specialized patient care units or hospitals. In the context of leadership-culture research in nursing, one study in the past (Kratina, 1990) suggested that personal attributes such as gender, age, hospital tenure, education and types of clinical specialty do not influence the way an individual (i.e., SN) perceives his/her NM's leadership style. Furthermore, Kratina (1990) emphasized that these variables are independent of the individual's perception of his or her nursing unit's culture. Additionally, the organizational culture is a cultural reality that exists externally to the individual member of the work group.

Findings of this study suggest that a majority of the features of the critical care and non-critical care nursing unit profiles were similar; both continuous and categorical variables, with the exception of the use of unlicensed assistive personnel (UAP) and nurse-to-patient ratio. Non-critical care nursing units tended to use UAP more frequently and had higher nurse-to-patient ratio

than critical care nursing units. For obvious reasons, critical care units require higher nurse-to-patient ratio than non-critical care units; critical care units have higher patient acuity levels (i.e., complex acutely-ill patients) when compared to non-critical care units. In addition, due to the increase in the number of nurses in the critical care units, the use of UAP is less, and to some extent is not necessary.

Furthermore, this study explored and systematically analyzed the nature of the relationship between the NMs' leadership styles and nursing unit organizational culture of the sample. Significant findings from the present study indicate that a relationship does exist between the leadership styles of NMs and nursing unit organizational culture in acute care hospitals. Transformational leadership was found to be positively related to nursing unit organizational culture, and a strong predictor of nursing unit organizational culture characterized by *mission* trait. Transactional leadership, however, has little or weak relationship with the nursing unit organizational culture. Additionally, a negative relationship between laissez-faire leadership and nursing unit organizational culture was found.

Findings of this study also suggest significant differences in the SNs perceptions of the leadership styles of their NMs and nursing unit organizational culture. Non-critical care NMs scored higher on transformational leadership than critical care NMs. Although both managers tended to display *contingent reward* transactional leadership, non-critical care

NMs scored significantly higher in this aspect. Moreover, non-critical care SNs rated their nursing units significantly higher than critical care SNs on all four organizational culture traits and indices measures. These differences are consistent with the findings that suggest non-critical care units have highly transformational nurse-leaders.

Significant Findings on the Relationship of NMs' Leadership Styles and Nursing Unit Organizational Culture As Perceived by SNs

Findings of the present study support the hypothesis (H1) that a relationship between NMs' leadership styles and nursing unit organizational culture, as perceived by nurses, exists. As predicted, correlation between the global transformational leadership score (measured by MLQ 5X) and the nursing unit organizational culture score (measured by DOCS) was significantly higher than the correlations among transactional leadership, laissez-faire leadership and DOCS scores. Therefore, the relationship between the transformational leadership behaviors of NMs and the high levels of culture traits could be inferred to the organizational effectiveness of the sample. This effectiveness was demonstrated by their *good performance ratings* in the SBHCS Nursing Report Card.

Transformational Leadership and Organizational Culture

The correlations between transformational leadership and organizational culture in the present study support the findings of a published study in the

field of business (Block, 2003). Block found that employees' high ratings on their immediate supervisors (i.e., company's first-line leaders) were more likely to view their organizational culture in "positive terms" as explained by high levels of four culture traits (i.e., DOCS scores). Explanation of Block's findings included the significant correlations between transformational leadership and culture traits. In the present study, significant correlations between transformational leadership and all of four culture traits (mission, adaptability, consistency and involvement) were also found ($r = .49$ to $.60$). Furthermore, the transformational leadership scale and factors were significantly associated with *mission* and *adaptability* culture traits (H1a supported). These findings suggest that a NM who frequently displays transformational leadership behavior to his or her nursing staff is likely to be associated with a positive, desirable and/or flexible nursing unit organizational culture in which *mission* and *adaptability* culture traits dominate. According to Denison (2005), organizations with a dominant *adaptability* trait enable the members of the organization (i.e., employees) to address the changing demands of the business, while organizations with dominant *mission* trait have employees who have clear understandings of the meaningful long-term directions of the organizations. Moreover, the employees have a sense of focus and a shared vision.

The Denison's Organizational Culture Model (DOCM), which explains organizational effectiveness, posits that *adaptability* and *mission* traits

address the external dynamics of the organizations. This organizational attribute focuses on the relationship between the organization and the external environment (Denison, 1997; Denison, 2005), which is essential in achieving desirable organizational outcomes. Inference may be drawn that such organizational culture dynamic exists in the nursing units of the sample based on the significant, positive correlations between transformational leadership and *adaptability* and *mission* traits in the present study. The existence of such a dynamic may be attributed to having SNs who are less resistant to change, are able to adapt to the demanding healthcare climate, and are able to meet the demands of consumers (i.e., patients) without compromising healthcare outcomes. The latter, however, is not an easy task to accomplish particularly in the midst of a cost-constrained environment.

Given the turbulent healthcare climate today, first-line nursing leaders are constantly challenged in maintaining staff job satisfaction, a healthy work environment and retention. To achieve and maintain organizational effectiveness in the current healthcare delivery system, a nursing unit needs high levels of *adaptability* and *mission* traits and a NM who frequently utilizes transformational leadership behaviors. It is imperative for the NM to create or shape a nursing unit culture that is innovative and adaptive in the delivery of nursing care. NMs who build such cultures and articulate them to followers typically exhibit a sense of vision and purpose. Further, NM's transformational leadership enables SNs to have a clear understanding of the various external

forces affecting contemporary nursing practice. Key aspects of transformational leadership include *inspirational motivation* and *individualized consideration*. These leadership behaviors are manifested by NMs' ability to energize, motivate and allow SNs to self-actualize in order to achieve SNs' potentials, thereby influencing and enabling SNs to function beyond their self-interest (McGuire & Kennerly, 2006; Ohman, 2000). These leadership skills allow SNs to accomplish extraordinary goals despite the prevailing turbulent healthcare dynamics. Therefore, a NM who possessed transformational leadership skills is the preferred leader in shaping a nursing unit organizational culture responsive to the current healthcare climate.

In the competitive healthcare climate, patient satisfaction must be a crucial goal for the survival of any healthcare facility. In the SBHCS, patient satisfaction is a critical outcome measure of organizational performance, and it remains as the priority goal parallel to patient safety in every nursing unit. Based on this, it was hypothesized that transformational leadership is the strong predictor of a nursing unit organizational culture characterized by *mission* trait. Results of multiple regression analyses suggest that transformational leadership is a stronger predictor of *mission* trait culture when compared to transactional leadership (H2 is supported). Further evaluation of the regression model demonstrated that only *inspirational motivation* had a significant contribution that is unique to the predictive power of transformational leadership. This means that a NM who demonstrates

leadership behaviors that energize SNs by viewing the future with optimism, stressing ambitious goals, projecting an idealized vision, and communicating to SNs that the vision is achievable (Avolio & Bass, 2004) may be able to create or shape a nursing unit organizational culture that is characterized by the *mission* trait. Findings of the present study corroborate Fisher's (2001) contention that mission culture influence organizational outcomes. Thus, nursing units that have achieved patient satisfaction ratings within or above the benchmark of the SBHCS typify a *mission* culture trait.

Hader (2006) calls for everyone who is involved in patient care to have a clear understanding about the hospital's mission. Moreover, Hader recommends that it is the leaders' responsibility to ensure that employees are educated regarding the direction and goals of the hospital. At the nursing unit level, it is the NM's role and responsibility to implement Hader's recommendation. To be successful in implementing such, NMs must possess the skills associated with aspects of transformational leadership. Hader also states that "when the organization's mission is in line with staff values, the base on which to build a winning culture is strong." That culture could be characterized by *mission* trait, and the key mechanism for achieving that culture is transformational leadership.

By taking the findings of the present study and Fisher's (2000) study, as well as Hader's assertions into account, one could conclude that, a NM who is effective in transmitting a clear mission statement to his or her SNs through

the use of transformational leadership behaviors, may be able to craft a nursing unit's organizational culture that strives for effective performance. It is also important to take note that the convergence of the findings of the present study with Block's (2003) findings inform us that transformational leadership is the leadership style that NMs' could capitalize and use as a leverage in shaping a patient care unit culture that typifies the four culture traits that link to organizational effectiveness. NMs must be informed or taught about transformational leadership (McGuire & Kennerly, 2006), which is critical in developing nursing unit organizational cultures aligned with the vision, mission and strategic goals of the hospital.

Transactional Leadership and Organizational Culture

Although transactional leadership has shown to be a success and is essential in certain organizations, such as in military units (Avolio & Bass, 2004), findings of the present study appears to suggest transactional leadership is not associated with desirable nursing units' organizational culture measured by DOCS. In the present study, transactional leadership measures account for 2.26% of the variance of the DOCS, suggesting a very little or weak correlation. This very small variance also implies that transactional leadership in general may not be the preferred leadership style that NMs use frequently and may not have the influence on shaping or creating nursing units that typify culture traits that link to organizational effectiveness.

However, further evaluation of transactional leadership factors showed that *contingent reward* accounts for 26% of the variance of the *involvement* and *consistency* traits. This finding is consistent with the understanding that *contingent reward* is a basic skill of first-line leaders like NMs. It is important to take note that the focus of *contingent reward* leadership is to clarify the roles and task requirements of the followers (i.e., SNs) and provide the followers with material or psychological rewards contingent on the fulfillment of the job or contractual obligations (Avolio & Bass, 2004). Thus, one could infer that frequent utilization of *contingency reward* leadership by NMs shape a nursing unit organizational culture characterized by *involvement* and *consistency* traits.

The DOCM posits that the combination of *involvement* and *consistency* cultural traits addresses the internal dynamics of an organization, but do not address the interaction of the organization with the external environment (Denison, 1997; Denison, 2005). These culture traits in nursing units could be interpreted as the opposite of *adaptability* and *mission* traits discussed previously. In the present study, not all of the transactional leadership factors positively correlated with the SNs' perceptions of their nursing units' organizational culture in terms of *involvement* and *consistency* (H1b is partially supported). Only *contingent reward* has shown positive, moderate and significant correlation with *involvement* and *consistency* traits (Table 9). Although transactional leadership in general may not be the preferred

leadership style by the NMs in the present study, it is important to note that *contingent reward* is not always associated with negative organizational outcomes. According to Avolio and Bass (2004), transformational leadership augments transactional leadership such as *contingent reward*. The ultimate outcome of *contingent reward* leadership is the enhancement of SN's role clarity, job satisfaction, and improved performance (McGuire & Kennerly, 2006).

Laissez-faire Leadership and Organizational Culture

The negative correlations between laissez-faire leadership and all four culture traits in the present study also supports Block's (2003) finding. These findings suggest that the absence of leadership, which is the characteristic of this type of leadership (Avolio & Bass, 2004) does not shape or create any type of nursing unit organizational culture (H1c supported). Laissez-faire leaders consciously avoid making decisions, abdicate responsibility, and do not use his or her authority (Avolio & Bass, 2004). As a result, the absence of significant purposeful interactions between the leader and employees, as such, the ineffective interaction brought about by laissez-faire leaders contributes to the organizational demise (McGuire & Kennerly, 2006).

Significant Findings on the Differences of Critical Care and Non-Critical Care
NMs' Leadership Styles as Perceived by SNs

The nursing leadership literature is saturated with research articles on the leadership styles or behaviors among nurses. However, most of the published studies did not address the differences of leadership styles of first-line nursing unit manager in critical care and non-critical care areas of acute care hospitals. Thus, this gap of knowledge was addressed in the present study.

Significant differences were found between the leadership styles of NMs as perceived by staff nurses. Non-critical care SNs perceived their NMs as more transformational leaders than the critical care SNs perceived their NMs. These findings may be attributed to the demographic characteristic findings that critical care SNs have more clinical experience and longer hospital tenure than non-critical care nurses.

In the present study, no significant differences were found between critical care and non-critical care NMs' transactional leadership styles as perceived by their SNs. Of the three transactional leadership factors, *contingent reward* was frequently utilized or displayed by the NMs to their SNs. Conversely, the other transactional leadership factors including *management-by-exception* (both active and passive), were least frequently utilized or displayed by the nursing unit managers to their nursing staff when compared to *contingent reward* transactional leadership. As discussed above, *contingent reward* appeared to be the preferred transactional leadership behavior of the sample.

The perceived *contingent reward* transactional leadership was higher in non-critical care than in critical care group. This could be explained by the fact that this leadership factor is basic to leadership, which is augmented by transformational leadership behaviors (Avolio & Bass, 2004) discussed above.

The significant differences of the critical care and non-critical care NMs' perceived leadership styles may be attributed to the nature and frequency of the interactions between the NMs and SNs. In non-critical care units, the number of support personnel (including physicians) and the ratio of experienced to inexperienced SNs are lower than in critical care (Chaboyer, Najman, & Dunn, 2001). As a result, one could assume that non-critical care NMs tended to interact with their staff more frequently and assist SNs in providing direct patient care. When a NM assists a SN in providing nursing care to patients, through anecdotal incidents, NMs tend to seize the opportunity to teach, coach, mentor and socialize with the SN. Thereby, such "consideration behavior" (Kratina, 1990) may be perceived as key aspects of transformational leadership. Critical care is a fast paced, technology driven and efficiency driven (e.g., moving patients in and out quickly) environment (Shortell, et al., 1994) where SNs and NMs interaction is minimal compared to non-critical care. Critical care SNs spend more time with their patients, patients' families, and have increased collaboration with the medical staff and other healthcare professionals (Chaboyer, Najman, & Dunn, 2001). Because

of the skill and experience of critical care SNs, critical care NMs tend to “back-off” or not interfere with SNs when a SN performs patient care. Based on the experience of the investigator, a NM who consistently monitors SNs compliance with policies, procedures, or patient care protocols, tended to be viewed by their SNs as a hyper vigilant NM, which in turn may be perceived as being a transactional leader. The MLQ form 5X measures the frequency of the interactions between the leader and the follower. As a result, whatever primary embedding mechanisms (e.g., leadership styles) the NM frequently demonstrates to his or her nursing staff is then the perceived leadership style the SN’s attributed to his or her NM.

A significant difference was also found between critical care and non-critical care NMs perceived laissez-faire leadership. Despite the significant difference ($p = .009$) in the mean laissez-faire scores of critical care NM ($M = .97$) and non-critical care NM ($M = .86$), one could conclude that NMs in both groups rarely demonstrate this type of leadership to their SNs. A “0” score from the MLQ form-5X denotes “no frequency” of displayed behavior while a score of “1” denotes a leadership behavior that is being displayed or used by the leader “once in a while” (Avolio & Bass, 2004). Inference could be drawn that very few NMs in this sample utilized laissez-faire leadership behavior six months prior to and during the implementation of this study. Thus, this finding is consistent with nursing leadership literature, which suggests that positive

organizational outcomes cannot be achieved by using laissez-faire leadership regardless of the nursing unit of practice.

Significant Findings on the Differences in the Organizational Culture of Critical Care and Non-Critical Care Units as Perceived by SNs

In the present study, significant differences in the magnitude of critical care and non-critical care SNs levels of perceptions of their nursing unit organizational cultures were found. Non-critical care nurses consistently rated their nursing unit culture higher than their critical care counterpart across cultural trait measures and indices. This finding could be attributed to the findings of the present study that non-critical care NMs were perceived as more transformational leaders than their counterpart. These data are consistent with published studies suggesting that transformational leadership influences the types and the levels of perceived organizational culture traits, measured by DOCS (Block, 2003; Fisher, 2001). Thus, the findings of the present study may suggest that non-critical care nursing units are more responsive than their critical care counterpart, to the external forces and internal demands of nursing units, which also enable them to balance the dynamics of a more stable and flexible organizational culture.

The DOCS instrument measures the degree to which the respondent (i.e. employee) agrees with the item. Mean scores above "3.0" are leaning toward higher levels of agreement (Denison, 200b). Findings of the present study revealed that SNs ratings of their nursing units lower ($M \geq 3.5$) in all four

culture traits when compared to employees ratings of high performing, profitable company ($M \geq 4.4$) (Block, 2003). This difference could be explained by the job description, work environment and organizational goals between SNs and business employees. Despite the difference, the findings of the study support the achievement of high patient satisfactions ratings were attributed to the "high" levels of organizational culture traits found in nursing units. For example, all SNs rated their nursing unit cultures on the higher end of the measurement scale including a mean global DOCS score of 3.6, and mean culture trait scores of 3.5 (adaptability), 3.6 (consistency), 3.5 (mission) and 3.7 (involvement). Thus, the DOCS is a viable alternative in describing a culture of a nursing unit from a "bottom-line" perspective (e.g., organizational performance) rather than the traditional "behavioral" approach to organizational culture research. Further investigation concerning the differences of critical care and non-critical care nursing unit organizational culture is warranted. In this aspect, findings of the present study may serve as the ground work for such purposes.

Limitations

Research has limitations. The present study is no exception. This study described and examined the relationship of NMs leadership styles and nursing unit organizational culture of the four acute care hospitals in the largest health care system in New Jersey. Limitations of the study design and measurement caution one not to draw definitive conclusions and generalizations from the findings.

A major limitation of this study is the use of a sample of convenience and a non-experimental research design, thus, research findings should be interpreted cautiously with due considerations of internal and external validity issues. Although, findings of this study demonstrated the empirical evidence supporting a relationship between leadership and organizational culture, one is cautioned to restrict its interpretation on the findings as association rather than causation. Moreover, this study was designed to determine the relationship of two variables, not to identify cause and effect, or demonstrate causality.

As discussed in Chapter II, debates on methodological congruence on the study of organizational culture exist in the literature. Several authors have proposed that qualitative methods are preferred over quantitative methods in order to provide the depth and breadth of descriptions of the life of the organization. This method was not selected in this study for obvious reasons: practicality and access to a larger sample. Thus, analysis of the data and

conclusions of the findings in this study were based on a particular point in the life of the nursing units and the perceived beliefs and attitudes of the SNs toward their NMs leadership and unit culture via their responses in the survey instruments.

Although quantitative survey research is a practical approach over qualitative methods such as interviews and observations when investigating studies of this type, it is important to take note that there are measurement issues inherent in the use of self-report methods. The present study's sole reliance on empirical measures such as surveys may have been associated with a systematic error, and the established psychometric property of the standardized measures (MLQ form 5X and DOCS) may limit the generalizability of the research findings (Block, 2003; Waltz, et al., 2005). This specific limitation is addressed in part by the consistency of the findings of the present study with Block, and those reported in nursing leadership literature. Moreover, potential threats to internal validity were minimized by ensuring that SNs complete the surveys before the start of their shifts in a locked quiet room, free from distractions and no interference with their NMs. Additionally, they were given full assurance that their responses are only available to the primary investigator.

Finally, limitations also exist with the external validity. Findings of the study may not be generalized to the critical care and non-critical care nursing units outside the SBHCS.

Implications of the Study

This study systematically explored the relationship of leadership and organizational culture in nursing units of acute care hospitals. Several implications from the findings of the present study provide applications to areas of nursing practice, education and research. More importantly, these findings are readily applicable to the SBHCS where the study was carried out. For example, the data of the study will be used to inform NMs and senior nursing executives on how transformational leadership practices by NMs may shape the actions, attitudes, values and beliefs of SNs toward achieving tangible organizational outcomes such as quality cost-effective care, patient safety and high levels of patient satisfaction. To date, these outcomes remain the top priority goals of the SBHCS (SBMC, 2005) and are critical to the health care system's strategic positioning in the competitive marketplace in New Jersey.

Aspiring and experienced NMs both within and outside the SBHCS must know or be educated and trained about transformational leadership. They must adopt transformational leadership strategies in order to develop or shape nursing unit cultures that have been linked to organizational effectiveness. Such a culture is characterized by high levels of cultural traits consisting *adaptability, mission, consistency* and *involvement* (Denison & Mishra, 1995). Additionally, NMs must also be informed about the positive

effect of *contingent reward* leadership, which augments transformational leadership necessary to achieve organizational effectiveness.

By having an understanding of the relationship of the above leadership styles and nursing unit organizational culture, the NM will have the added skill and knowledge to effectively lead, influence and shape a nursing unit's culture that is responsive to the external and internal demands of healthcare and is aligned with the mission, vision and strategic objectives of the hospital. As Schein (2004) argues, to better understand the organization one must understand the culture. By understanding an organization's culture, a leader can influence change to achieve excellence (Sproat, 2001). The findings of the present study provide empirical evidence supporting Sproat's assertion, and the importance to further understand the dynamics of leadership-culture phenomena in nursing. In this context, it is essential for first-line nursing leaders to acquire knowledge and skills on organizational cultural competence. Block (2003) states that: "If we are to succeed in our efforts to build healthy, sustainable organizations, we must continue to invest in the development of cultural leaders who understand and respect the people that are the heart of their success" (p. 332). Therefore, having a better understanding of the organizational culture allows the NM to tailor leadership strategies that will create a positive impact in nursing unit's performance.

Achieving the required competencies on leadership and organizational culture cannot be accomplished through experience alone or by virtue of having leadership characteristics (e.g., "people skills") innate to the new or aspiring nurse leader. A novice NM must be taught, coached and mentored on the above leadership strategies supported by the findings of this study. It is unfortunate however, that many NMs, more often than not, assume their roles with a lack of preparation (Mathena, 2002). As such, the lack of leadership knowledge and skills has resulted in negative nursing unit organizational outcomes and NMs' role failures (Grindel, 2003). These known facts should not be perpetuated by the individuals who are responsible for hiring NMs such as chief nursing officers (CNOs). As stated by Kouzes and Posner (2002), "leadership is a learned skill," therefore, it can be taught and developed. Nurse executives, like CNOs and nursing directors play a crucial role in the role development and role effectiveness of a NM (McGuire & Kennerly, 2006).

Nurse educators and executives have the moral and professional obligations to better prepare first-line nurse leaders in the 21st century. Leadership courses offered in the undergraduate and graduate nursing programs should place an emphasis on educating students about the evidence presented here and its impact on organizational performance. Moreover, hospitals and healthcare organizations that sponsor leadership workshops and seminars exclusively for first-line NMs must incorporate such topics in their educational programs as well. Collectively, nurse educators and

hospital administrators should work together to assist NMs' in achieving leadership competencies essential to the enhancement of nursing unit's performance.

To date, this research is one of the very few investigations that addressed leadership and organizational culture phenomena in nursing units. Also, this may be the first study of its kind that utilized the Denison's Organizational Culture Model (DOCM) in conceptualizing and measuring organizational culture in nursing. Thus, the outcome of this study is considered a baseline for future research or dialogue concerning leadership-culture relationship as explanatory constructs for organizational effectiveness in nursing.

Furthermore, the findings of this study may be used by other investigators in operationalizing concepts of organizational culture and effectiveness in nursing, in which *business* terms could be used. Consequently, study findings are easily translated and applied to the "real world" (Denison, 2000b).

Finally, it is ubiquitous in any acute care hospitals today to use the best available evidence to guide clinical practice as well as leadership. Although findings of the present study do not imply leadership and organizational culture causation, one could be guided by the understanding of its association described above. Despite the limitations inherent to this study, research findings could be utilized in various areas of nursing, including education, practice and research.

Chapter VI

CONCLUSIONS

This study was executed to address the need of explaining the general assumption that leadership creates or shapes the characteristics of organizational culture and vice versa. In nursing, a majority of the published studies in these areas have focused primarily on the chief nursing executives' leadership and their impact on the organizational culture. The nursing administration literature is filled with scholarly work on leadership and organizational culture, however, little is known about the relationship of the first-line nursing leadership and nursing units' culture. Moreover, the leadership-culture connection in general is not a well-understood topic across disciplines due to lack of empirical research findings (Block, 2003). Thus, this study initiated the process of understanding this phenomenon in the context of high performing nursing units in acute care hospitals.

The present study was conceptualized and designed around the theoretical framework of leadership and organizational culture as explanatory constructs of organizational performance. As a result, the leadership styles of first-line NMs' were associated with certain types of organizational culture traits in high performing nursing units at Saint Barnabas Health Care System (SBHCS) demonstrated by quality nursing care and patient satisfaction. From

a general organizational performance standpoint, it could be concluded in this study that the transformational leadership styles of a NM is likely to create or shape an effective nursing unit organizational culture characterized by high levels of cultural traits (mission, adaptability, involvement and consistency). Such leadership styles have a strong influence in developing nursing units in which *mission* transcends among the other cultural traits. This organizational attribute is exemplified by SNs who share a common vision, mission and is aligned with the strategic objectives of the hospital. Similarly, the transactional *contingent reward* leadership of the NM is likely to create or shape certain culture traits (e.g., consistency and involvement) essential for the internal operations of the nursing unit, which augments the effect of transformational leadership styles of a NM. Conversely, the laissez-faire leadership style does not influence a nursing unit's culture because of the absence of purposeful interaction between NMs and SNs. Thus, organizational performance cannot be associated with this type of leader-follower's dyad.

In this study, the organizational culture was operationalized by using the Denison's Organizational Culture Model (DOCM). This model posits that effective organizations are manifested by high levels of cultural traits and are able to balance and reconcile the dynamic tensions of flexibility and stability within the organization. In this context, certain pairs of cultural traits denote specific organizational attributes (Denison, 1997; Denison, 2005; Denison & Mishra, 1995). Based on the findings of the present study, one could

conclude that the transformational leadership styles of NMs are associated with nursing unit cultures that are flexible, adaptive and responsive to the external demands of the nursing units. As such, this organizational attribute is explained by high levels of *mission* and *adaptability* culture traits (Denison & Mishra, 1995). On the contrary, the transactional *contingent reward* leadership style of NMs is associated with nursing unit cultures that are less flexible and more concerned with their "internal" issues only (Denison, 1997). Members (e.g., SNs) of this type of nursing unit tend to embrace the sense of belongingness or being "highly involved," a common manifestation for a group that needs stability. As such, this organizational attribute is explained by high levels of *consistency* and *involvement* culture traits (Denison & Mishra, 1995). In summary, transformational leadership and transactional *contingent reward* leadership are the NMs' leadership styles that are associated with nursing unit cultures that have the ability to balance the dynamics of flexibility and stability within their units and are essential for maintaining organizational effectiveness.

While many published research articles do not differentiate the leadership styles of critical care and non-critical care NMs, it could be concluded from this study that non-critical care NMs are more transformational leaders than their counterpart. This significant leadership difference in leadership styles perceived by their SNs is also consistent with the SNs' perceptions of their nursing units' culture. Non-critical care SNs perceived their nursing units as

having higher levels of culture traits than their counterpart. The difference between critical care and non-critical care NMs' leadership styles are consistent in the literature supporting the influence of transformational leadership on enhancing these culture traits (Block, 2003) and in organizational cultures that are innovative and satisfying to the group members (Bass & Avolio, 1993). Therefore, a NM, who is being perceived as a transformational leader, is able to increase the perceived culture levels of his or her nursing unit, which is also a manifestation of organizational effectiveness.

Future Directions

The conclusions presented here unravel the implicit theoretical understanding of leadership-culture connection in the context of nursing practice. The empirical evidence concerning such phenomenon in nursing units' bridges the gap in knowledge that is lacking in nursing discipline's that the relationship of NM's leadership styles and nursing unit's organizational culture exists. The leadership styles of NMs can influence a specific type(s) of a nursing a unit culture. Transformational leadership is associated with all four culture traits – reflective of an effective organization in which employees have a clear understanding about the mission of the organization and collectively share a common interest and vision. The transformational leader plays a critical role in enabling his or her nursing staff to be flexible, adaptive and responsive to the daily challenges brought about by the constantly changing

healthcare delivery system. Furthermore, the basic foundation of effective leadership such as *contingent reward* transactional leadership should not be ignored. This specific leadership characteristic augments the effect of transformational leadership. This leadership style enables NMs to create or shape a nursing unit that embraces a sense of unity essential to the stability of their work group. Therefore, both transformational and *contingent reward* transactional leaderships are essential in achieving organizational effectiveness in nursing. Despite the significance of these findings, further research is required due to the inherent limitations presented here.

Future research could be pursued in three stages. The first stage is to replicate the present study with the same design and methods involving a wide-range sample by increasing the number of male and ethnic minority SNs to enhance the generalizability of the findings. Additionally, a sampling procedure that could be employed in this stage includes randomized, cluster sampling from various regions of the United States (e.g., Northeast, Southeast, Midwest, Northwest and Southwest) to enhance the external validity of the findings. It is also important in this stage to explore other variables that may mediate, influence or be associated with the differences in the NMs' leadership styles and nursing unit organizational cultures as perceived by critical care and non-critical care SNs.

The second stage should address the methodological debates concerning organizational culture studies. Qualitative and quantitative research methodologies should be used. Additionally, an important methodological issue that could be addressed in the second stage of future research is the *unit of analysis*. Individuals, groups or both could be the unit of analysis in leadership, as well as in organizational culture research depending on the aim of the study and research questions (Antonakis, Cianciolo, & Sternberg, 2004; Seago, 1997). Multiple or mixed units of analyses require the use of advanced statistical procedures in analyzing data including hierarchical linear modeling (Seago, 1997), intra class correlations (Antonakis et al., 2004) and within or between group analysis (Antonakis et al., 2004; Seago, 1997). Thus, in the future, data should be analyzed and reported around the context of *unit of analysis*.

A constellation of leadership-culture knowledge that will be derived from the above stages of investigations will serve as a strong foundation for the third stage of inquiry. This stage should address the long-standing debates on whether leadership creates or shapes the organizational culture and vice versa. Experts in organizational and leadership studies assert that the interplay between leadership and culture is constant (Bass & Avolio, 1993) and that the leaders shape the culture of the organization while culture dictates leadership behaviors (Schein, 2004). However, controversies and

debates over these assumptions continue due to lack of empirical evidence (Block, 2003; Sarros et al., 2001).

A longitudinal study is required to provide a comprehensive picture of various stages of the organizational life of nursing units. For example, it is noteworthy to determine the NMs and SNs behaviors during hospitals, department or nursing units merging, restructuring of patient care services or overall organizational change, etc. It would be interesting to find out the leader-follower relationship, and the ability of the nursing unit to be flexible and yet attain stability during the aforementioned times. In this context, a concrete assessment of the leadership skills of the NM may emerge. Huber (2000) explains that a transformational leader uses "higher-order change" in changing the status quo and is comfortable in operating in a different culture, when compared to a transactional leader (Block, 2003).

Furthermore, experimental design should be considered in the third stage of inquiry. Findings in this stage will offer an initial understanding of the cause and effect of leadership and organizational culture phenomena in nursing units and vice versa. This stage will also provide investigators the groundwork for developing an explanatory model of organizational effectiveness in nursing units.

To date, no study of this type has used a business model in describing a nursing unit organizational culture. This approach, however, provides a different perspective in assessing and measuring nursing unit organizational

culture in the context of organizational performance or effectiveness.

Similarly, this study set the stage to further understand the influence of first-line NMs in the development of unit cultures responsive to the contemporary healthcare delivery system. And, it is the NM, not the CNO, who drives the successes of nursing units which ultimately contribute to the overall performance of acute care hospitals. Transformational leadership, to some extent *contingent reward leadership*, and high levels of *mission, adaptability, consistency* and *involvement* culture traits are essential in achieving tangible organizational outcomes that impact the "bottom-line" of the acute care hospitals today. Finally, the continuing efforts to expand the knowledge of leadership and organizational culture, is obviously supported by this study.

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Appendix A

Definition of Terms

1. *Acute Care Hospital* refers to a healthcare facility in which a patient is treated for a brief but severe episode of illness, for conditions that are the result of disease of trauma, and during recovery from surgery.
2. *Beacon Award for Critical Care Excellence* is a national award given by the American Association of Critical Care Nurses to recognize critical care nursing units that have achieved high standards for quality, exceptional care of patients; and healthy, humane, and healing work environments.
3. *Embedding mechanism* is a term used to describe, on how leaders get their messages transmit to their subordinates or followers.
4. *Magnet Status Nursing Excellence Award* is a national award given by the American Nurses Credentialing Center in recognition of health care organizations that provide excellent nursing care, and upholds advancement of nursing profession.
5. *Nurse Manager*, which referred to as *Nursing Unit Manager* is a first-line manager who has a 24-hour responsibility and accountability of the operations of the nursing unit. Typical job function of a NM includes (1) assisting with the development of patient care standards, employee orientation and continuing education; (2) hiring, and evaluating staff performance; (3) developing, implementing, and maintaining unit budget;

(4) participating in quality or performance improvement initiatives; and (5) performing administrative duties including overseeing unit-staffing status, scheduling and maintenance of supply and equipment, etc. The intent of using the term *Nursing Unit Manager* in this dissertation was mainly related to clarity.

6. *Nurse Managers' Leadership Styles* refer to the different combinations of task and relationship behaviors used by nurse managers or nursing unit managers to influence staff nurses' in accomplishing goals. These are categorized as transformational, transactional, and nontransactional laissez-faire leadership styles measured by the MLQ-5X rater form.
7. *Nurse Report Card* is a nurse-sensitive measurement tool that measures the following outcomes: recruitment and retention, financial and staffing, patient safety, and quality and satisfaction. Each measurement criterion comprises of several indicators. For example, the indicators on: (1) *recruitment and retention* include registered nurses turnover and vacancy rates, (2) *financial and staffing* include percentages of overtime and sick time, (3) *patient safety* include infection rate, falls, and medication errors, and (4) *quality and satisfaction* include patient satisfaction scores. The ratings/data are used to establish benchmarks, thereby serving as a basis for evaluating and improving nursing care across the healthcare system.

8. *Nursing Staff* is a registered nurse (RN) who collaborates and administers individualized age-specific professional care to patients within an assigned nursing unit of the hospital. Additional job function of a staff RN may include participation in unit performance improvement evaluation activities, patient education, and discharge planning.
9. *Nursing Unit* is where the patient care is taking place. Nursing units vary among hospitals depending on the level of healthcare services provided:
 - a. *Critical care units* are specialty patient care units, which include intensive care units (e.g., burn, coronary care, medical-surgical, cardiothoracic, neurosurgical, pediatric and neonatal) post-anesthesia care units/recovery room and emergency department. Additionally, interventional cardiology units were categorized as critical care units as well.
 - b. *Non-critical care units* refer to progressive care units (e.g., cardiac, medical, surgical telemetry and stepdown units) and general acute patient care units including medical, oncology, general surgical, renal, neurology, orthopedics, antepartum, labor and delivery units, pediatrics, wound care, etc.
10. *Nursing Unit Organizational culture* is defined by four organizational culture traits comprising the Denison's Organizational Culture Model including mission, adaptability, consistency, and involvement, measured by the Denison Organizational Culture Survey.

11. *Organizational Effectiveness* is a feature of high-performing nursing units, as evidenced by achieving good ratings in the Nurse Report Card utilized by the Patient Care Services across The Saint Barnabas Health Care System in New Jersey.

Appendix B

Multifactor Leadership Questionnaire – Form 5X

Code: _____ SN _____

Multifactor Leadership Questionnaire – Form 5X

This questionnaire is used to describe the leadership style of your **nurse manager** as you perceive it. Please answer all items on this answer sheet. **If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank.** Please answer this questionnaire anonymously.

Forty-five descriptive statements are listed on the following pages. Judge how frequently each statement fits the person you are describing. Use the following rating scale:

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
0	1	2	3	4

The Person I Am Rating...

1. Provides me with assistance in exchange for my efforts..... 0 1 2 3 4
2. Re-examines critical assumptions to question whether they are appropriate..... 0 1 2 3 4
3. Fails to interfere until problems become serious..... 0 1 2 3 4
4. Focuses attention on irregularities, mistakes, exceptions, and deviations from standards..... 0 1 2 3 4
5. Avoids getting involved when important issues arise..... 0 1 2 3 4
6. Talks about his/her most important values and beliefs..... 0 1 2 3 4
7. Is absent when needed..... 0 1 2 3 4
8. Seeks differing perspectives when solving problems..... 0 1 2 3 4
9. Talks optimistically about the future..... 0 1 2 3 4
10. Instills pride in me for being associated with him/her..... 0 1 2 3 4
11. Discusses in specific terms who is responsible for achieving performance targets... 0 1 2 3 4
12. Waits for things to go wrong before taking action..... 0 1 2 3 4
13. Talks enthusiastically about what needs to be accomplished..... 0 1 2 3 4
14. Specifies the importance of having a strong sense of purpose..... 0 1 2 3 4
15. Spends time teaching and coaching..... 0 1 2 3 4
16. Makes clear what one can expect to receive when performance goals are achieved 0 1 2 3 4
17. Shows that he/she is a firm believer in "if ain't broke, don't fix it"..... 0 1 2 3 4
18. Goes beyond self-interest for the good of the group..... 0 1 2 3 4
19. Treats me as an individual rather than just a member of a group..... 0 1 2 3 4
20. Demonstrates that problems must become chronic before taking action..... 0 1 2 3 4

Continued on next page

Appendix B

Multifactor Leadership Questionnaire – Form 5X (Page 2)

	Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
	0	1	2	3	4
21. Acts in ways that builds my respect.....	0	1	2	3	4
22. Concentrates his/her full attention on dealing with mistakes, complaints, and failures	0	1	2	3	4
23. Considers the moral and ethical consequences of decisions.....	0	1	2	3	4
24. Keeps track of all mistakes.....	0	1	2	3	4
25. Displays a sense of power and confidence.....	0	1	2	3	4
26. Articulates a compelling vision of the future.....	0	1	2	3	4
27. Directs my attention toward failures to meet standards.....	0	1	2	3	4
28. Avoids making decisions.....	0	1	2	3	4
29. Considers me as having different needs, abilities, and aspirations from others.....	0	1	2	3	4
30. Gets me to look at problems from many different angles.....	0	1	2	3	4
31. Helps me to develop my strengths.....	0	1	2	3	4
32. Suggests new ways of looking at how to complete assignments.....	0	1	2	3	4
33. Delays responding to urgent questions.....	0	1	2	3	4
34. Emphasizes the importance of having a collective sense of mission.....	0	1	2	3	4
35. Expresses satisfaction when I meet expectations.....	0	1	2	3	4
36. Expresses confidence that goals will be achieved.....	0	1	2	3	4
37. Is effective in meeting my job-related needs.....	0	1	2	3	4
38. Uses methods of leadership that are satisfying.....	0	1	2	3	4
39. Gets me to do more than I expected to do.....	0	1	2	3	4
40. Is effective in representing me to higher authority.....	0	1	2	3	4
41. Works with me in a satisfactory way.....	0	1	2	3	4
42. Heightens my desire to succeed.....	0	1	2	3	4
43. Is effective in meeting organizational requirements.....	0	1	2	3	4
44. Increases my willingness to try harder.....	0	1	2	3	4
45. Leads a group that is effective.....	0	1	2	3	4

Thank You Very Much!

Appendix C

The Denison's Organizational Culture Survey

Code: _____ SN _____

Denison Organizational Culture Survey

This questionnaire is used to describe the organizational culture of **your nursing unit**. Please answer all items on this form. **If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank.** Also, please take note that the word **customer** refers to your patients, patient's family or significant others.

There are sixty descriptive statements listed on the following pages. Please use the following rating scale in describing your *nursing unit organizational culture*:

Strongly Disagree 1	Disagree 2	Neutral 3	Somewhat Agree 4	Strongly Agree 5
------------------------	---------------	--------------	---------------------	---------------------

In my unit...

1. Most employees are highly involved in their work..... 1 2 3 4 5
2. Decisions are usually made at the level where best information is available..... 1 2 3 4 5
3. Information is widely shared so that everyone can get the information he or she needs when it's needed..... 1 2 3 4 5
4. Everyone believes that he or she can have a positive impact..... 1 2 3 4 5
5. Business planning is ongoing and involves everyone in the process to some degree 1 2 3 4 5
6. Cooperation across different parts of the organization is actively encouraged..... 1 2 3 4 5
7. People work like they are part of a team..... 1 2 3 4 5
8. Teamwork is used to get work done, rather than hierarchy..... 1 2 3 4 5
9. Teams are our primary building blocks..... 1 2 3 4 5
10. Work is organized so that each person can see the relationship between his or her job and the goals of the organization 1 2 3 4 5
11. Authority is delegated so that people can act on their own..... 1 2 3 4 5
12. The "bench strength" (capability of people) is constantly improving..... 1 2 3 4 5
13. There is continuous investment in the skills of employees..... 1 2 3 4 5
14. The capabilities of people are viewed as an important source of competitive advantage..... 1 2 3 4 5
15. Problems often arise because we do not have the skills necessary to do the job..... 1 2 3 4 5
16. My nurse manager "practices what she/he preach"..... 1 2 3 4 5

Continued on next page

Appendix C

The Denison's Organizational Culture Survey (Page 2)

Strongly Disagree 1	Disagree 2	Neutral 3	Somewhat Agree 4	Strongly Agree 5
------------------------	---------------	--------------	---------------------	---------------------

17. There is a characteristic management style and a distinct set of management practices.....	1	2	3	4	5
18. There is a clear and consistent set of values that governs the way we do business...	1	2	3	4	5
19. Ignoring core values will get you in trouble.....	1	2	3	4	5
20. There is an ethical code that guides our behavior and tells us right from wrong.....	1	2	3	4	5
21. When disagreement occur, we work hard to achieve "win-win" solutions.....	1	2	3	4	5
22. There is a "strong" culture.....	1	2	3	4	5
23. It is easy to reach consensus, even on difficult issues.....	1	2	3	4	5
24. We often have trouble reaching agreement on key issues.....	1	2	3	4	5
25. There is a clear agreement about the right way and the wrong way to do things.....	1	2	3	4	5
26. Our approach to doing business is very consistent and predictable.....	1	2	3	4	5
27. People from different parts of the organization share a common perspective.....	1	2	3	4	5
28. It is easy to coordinate projects across different parts of the organization.....	1	2	3	4	5
29. Working with someone from another part of this organization is like working with someone from a different organization.....	1	2	3	4	5
30. There is good alignment of goals across levels.....	1	2	3	4	5
31. The way things are done is very flexible and easy to change.....	1	2	3	4	5
32. We respond well to competitors and other changes in the business environment...	1	2	3	4	5
33. New and improved ways to do work are continually adopted.....	1	2	3	4	5
34. Attempts to create change usually meet with resistance.....	1	2	3	4	5
35. Different parts of the organization often cooperate to create change.....	1	2	3	4	5
36. Customer comments and recommendations often lead to changes.....	1	2	3	4	5
37. Customer input directly influences our decisions.....	1	2	3	4	5
38. All members have a deep understanding of customer wants and needs.....	1	2	3	4	5
39. The interest of the customer often get ignored in our decisions.....	1	2	3	4	5
40. We encourage direct contact with customers by our people.....	1	2	3	4	5
41. We view failure as an opportunity for learning and improvement.....	1	2	3	4	5
42. Innovation and risk taking are encouraged and rewarded.....	1	2	3	4	5
43. Lots of things "fall between the cracks".....	1	2	3	4	5

Continued on next page

Appendix C

The Denison's Organizational Culture Survey (Page 3)

	Strongly Disagree 1	Disagree 2	Neutral 3	Somewhat Agree 4	Strongly Agree 5
44. Learning is an important objective in our day-to-day work.....	1	2	3	4	5
45. We make certain that the "right hand knows what the left hand is doing".....	1	2	3	4	5
46. There is a long-term purpose and direction.....	1	2	3	4	5
47. Our strategy leads other organizations to change the way they compete in the industry.....	1	2	3	4	5
48. There is a clear mission that gives meaning and direction to our work.....	1	2	3	4	5
49. There is a clear strategy for the future.....	1	2	3	4	5
50. Our strategic direction is unclear to me.....	1	2	3	4	5
51. There is a widespread agreement about goals.....	1	2	3	4	5
52. Leaders set goals that are ambitious, but realistic.....	1	2	3	4	5
53. The leadership has "gone on record" about the objectives we are trying to meet.....	1	2	3	4	5
54. We continuously track our progress against out stated goals.....	1	2	3	4	5
55. People understand what needs to be done for us to succeed in the long run.....	1	2	3	4	5
56. We have a shared vision of what the organization will be like in the future.....	1	2	3	4	5
57. Leaders have a long- term view point.....	1	2	3	4	5
58. Short-term thinking often compromises our long-term vision.....	1	2	3	4	5
59. Our vision creates excitement and motivation for our employees.....	1	2	3	4	5
60. We are able to meet short-term demands without compromising our long-term vision.....	1	2	3	4	5

Thank You Very Much!

Appendix D

Solicitation Letter for Staff Nurses



Dear Staff Nurse,

My name is Jesus (Jessie) Casida and I am a doctoral candidate at Seton Hall University's School of Graduate Medical Education. I am conducting a research project titled "*The relationship of nurse managers' leadership styles and nursing unit organizational culture in acute care hospitals,*" which will culminate in my dissertation.

You are being invited to participate in this research study because you are a staff member of a patient care unit that has demonstrated nursing excellence. However, *if you are not a full-time day shift staff nurse for at least 6 months in this unit,* you are not eligible to participate in the study.

The purpose of my research is to explore the relationship of nurse managers' leadership styles and nursing unit organizational culture. Nurses who are working in a *positive* organizational culture with nurse managers that practices desirable leadership behaviors such as being *charismatic* and a *visionary* are associated with excellent nursing unit performance, demonstrated by quality and cost-effective patient care, high levels of patient and nurse satisfaction, etc. However, despite the many references surrounding leadership and organizational culture as major factors that explain the effectiveness of an organization, little is known about the *relationship* of these factors, particularly in nursing. I am very interested in better understanding this subject. However, this will not be realized without your help. Your participation is invaluable, to me, and to our profession at large. Results of this study may provide aspiring and experienced nurse managers with the preferred leadership styles they should practice in the hospitals today. Additionally, results of this study will also provide an avenue for advancing our knowledge on leadership and organizational culture in nursing units.

Your participation in this study will include the completion of 3 questionnaires found inside this folder, which will take you at approximately 30 minutes in total to complete. These questionnaires include the following:

1. *Staff Nurse Demographic Profile.* The purpose of this questionnaire is to collect demographic information including age, gender, ethnicity, years of nursing experience, years of employment and educational background.
2. *The Multifactor Leadership Questionnaire- Form 5X.* This questionnaire asks your opinion of the leadership style of your nurse manager. This questionnaire is frequently utilized by researchers in investigating leadership styles of nurses.
3. *The Denison's Organizational Culture Survey.* This questionnaire asks your opinion of your nursing unit organizational culture. This is one of the standard questionnaires used in investigating organizational culture in various levels of the organization.

Seton Hall University
Institutional Review Board

JUL 14 2006

Approval Date

School of Graduate Medical Education
Department of Graduate Programs in Health Sciences
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Expiration Date

JUL 14 2007

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Appendix D

Solicitation Letter for Staff Nurses (Page 2)

The procedure of this study will involve the following steps:

1. You will read and understand the attached informed consent form.
2. You will complete the questionnaires before the start of your shift in a quiet room with the door closed and free from distraction.
3. Upon completion, you will return the completed questionnaires in the drop box located in the nurses' station.
4. You will keep the solicitation letter and the informed consent form.

Your participation in the research study is entirely voluntary. Return of the completed questionnaires implies your consent to participate. You may decide not to participate at any time. If you decide not to participate, you will not be penalized or lose any benefits to which you would be otherwise entitled.


You will not be asked to disclose your name on any part of the questionnaire. Each of the above mentioned questionnaires will be coded by letters and numbers to maintain complete anonymity at all times.

The completed questionnaires and results of this study will be stored in a locked cabinet in the primary investigator's office at Seton Hall University. The primary investigator, J. Casida, is the only individual who will have access to all of the research data for a period of three years. Thereafter, all research related documents will be destroyed.

You have the option to complete the questionnaires at any day during the next four weeks. Once you complete the questionnaires, you will not be asked to complete it again. If you would like to know the results of the study, please feel free to contact me and I will provide you with the information.

You have the right to ask questions concerning this study at any time. If you have any questions concerning this study or your rights as a study participant, please contact the primary investigator, Jessie Casida, through the office of Dr. Genevieve Pinto-Zipp, Dissertation Advisor and Chair of Graduate Programs in Health Sciences at Seton Hall University School of Graduate Medical Education at 973-275-2076. This project has been approved by the Seton Hall University Institutional Review Board (IRB) for Human Subjects Research. The Office of the IRB at Seton Hall University may be reached at 973-313-6314.

Thank you very much for your invaluable contribution to this project.


 Jesus (Jessie) Casida
 Doctoral Candidate
 School of Graduate Medical Education
 Seton Hall University

Seton Hall University
 Institutional Review Board

JUL 14 2006

Approval Date

Expiration Date

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Appendix E

Staff Nurses' Informed Consent



INFORMED CONSENT FORM FOR STAFF NURSES

Study Title: The Relationship of Nurse Managers' Leadership Styles and Nursing Unit Organizational Culture in Acute Care Hospitals

Affiliation

My name is Jesus (Jessie) Casida and I am a doctoral student in the School of Graduate Medical Education at Seton Hall University. Currently, I am conducting a research project that will culminate in my dissertation.

Purpose

You are being invited to participate in this research study because you are a staff member of a patient care unit that has demonstrated nursing excellence. Studies have shown that nurse manager leadership and organizational culture are two important factors that influence the performance of nursing units such as yours. However, the relationship of the nurse manager's leadership and nursing unit culture is not clear. Research is needed now to clearly understand such a relationship. Thus, the purpose of this study is to explore, and explain the relationship between nurse manager's leadership style and nursing unit organizational culture.

Procedure

You will be asked to complete the 3 questionnaires found inside this folder:

- (1) *Staff Nurse Demographic Profile*. The purpose of this questionnaire is to collect demographic information including age, gender, ethnicity, years of nursing experience, years of employment and educational background.
- (2) *The Multifactor Leadership Questionnaire- Form 5X*. This questionnaire asks your opinion of the leadership style of your nurse manager. This questionnaire is frequently utilized by researchers in investigating leadership styles of nurses. A sample question that you will encounter in this form includes: "The person that I am rating provides me with the assistance in exchange for my efforts."
- (3) *The Denison's Organizational Culture Survey*. This questionnaire asks your opinion of your nursing unit organizational culture. This is one of the standard questionnaires used in investigating organizational culture in various levels of the organization. A sample question that you will encounter in this form includes: "In my unit, most employees are highly involved in their work."

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Appendix E

Staff Nurses' Informed Consent (Page 2)

It is very important that you complete the questionnaires before the start of your shift, in a quiet room such as a "break room" or an empty patient room, with the door closed, and free from distraction. The time required to complete the questionnaires should be no longer than 30 minutes. Upon completion, you will return the completed questionnaires in a drop box located in your nurses' station. You will keep the solicitation letter and this consent form. Please return the questionnaires within 4 weeks of receipt.

Voluntary Participation

Your participation in the research study is entirely voluntary. You may decide not to participate at any time. If you decide not to participate, you will not be penalized or lose any benefits to which you would be otherwise entitled. Consent to participate in this study is indicated by returning the enclosed questionnaires to the primary investigator via the drop box.

Anonymity

You will not be identified by name or description in any reports or publications about this study. A coding system, through the use of numbers and letters found in the top left hand corner of each questionnaire will be used to maintain complete anonymity at all times.

Confidentiality

All information about this study will be kept strictly confidential. All research data will be stored in a locked cabinet in the primary investigator's office at Seton Hall University. The primary investigator, J. Casida, is the only individual who will have access to all of the research data for a period of three years. Thereafter, all research related documents will be destroyed.

Risks

There is no foreseeable risk factor or discomfort of any part of this research project.

Benefits of Participation

There are no proposed direct benefits of the study for you. However, the results of this study will provide nurse managers, hospital administrators, educators, and researchers about the relationship of nurse managers' leadership styles and nursing unit organizational culture and the importance of this relationship to nursing unit performance. This could assist in the maintenance of nurse retention, high quality and cost-effective patient care, and patient satisfaction.

Appendix E

Staff Nurses' Informed Consent (Page 3)

Compensation

There will be no monetary or any kind of compensation for participation in this study.

Alternative Procedures

There are no alternative ways to participate in this study.

Contact Information

You have the right to ask questions concerning this study at any time. If you have any questions concerning this study or your rights as a study participant, please contact the primary investigator, Jessie Casida, through the office of Dr. Genevieve Pinto-Zipp, Dissertation Advisor and Chair of Graduate Programs in Health Sciences at Seton Hall University School of Graduate Medical Education at 973-275-2076.

This project has been approved by the Seton Hall University Institutional Review Board (IRB) for Human Subjects Research. The IRB believes that the study procedures adequately safeguard the study participant's privacy, welfare, civil liberties, and rights. The Office of the IRB at Seton Hall University may be reached at 973-313-6314.

Informed Consent

I fully understand the purposes of this study and the lack of potential risks as well as potential benefits of my participation. My consent to participate in this study is indicated by returning the completed questionnaires to the primary investigator.

Appendix F

Staff Nurses' Demographic Profile Data Collection Tool

_____ SN _____

Staff Nurse Demographic Profile

Please mark an X in the box to the left of the response and fill-in-the blanks with appropriate information.

1. Age _____
2. Gender Male Female
3. Ethnic Background African American Asian
 Caucasian Hispanic
 Native American Other _____
4. Total number of years of acute nursing experience _____ or
critical care nursing experience _____
5. Total number of years in this nursing unit _____
6. Total number of years in this hospital _____
7. Specialty Certification (Please select all apply):
 CCRN CEN
 CPAN OCN
 PCCN RN,C Other _____
8. Educational Background. Please indicate the highest degree you have earned:
 Diploma in Nursing
 Associate Degree in Nursing
 Bachelor of Science in Nursing
 Bachelor's degree in other field
 Master's degree in Nursing
 Dual Master's degree: MSN/MBA Other _____
 Master's degree in other field
 Doctoral degree in Nursing
 Doctoral degree in other field

Thank You Very Much!

Appendix G

Solicitation Letter for Nurse Managers



Dear Nurse Manager,

My name is Jesus (Jessie) Casida and I am a doctoral candidate at Seton Hall University's School of Graduate Medical Education. I am conducting a research project titled "*The relationship of nurse managers' leadership styles and nursing unit organizational culture in acute care hospitals*," which will culminate in my dissertation.

You are being invited to participate in this research study because you are a nurse manager of a nursing unit that has demonstrated nursing excellence. However, *if you are a manager in this unit for less than 6 months or if you do not have 15 or more staff nurses*, you are not eligible to participate in the study.

The purpose of my research is to explore the relationship of nurse managers' leadership styles and nursing unit organizational culture. Nurses who are working in a *positive* organizational culture with nurse managers that practices desirable leadership behaviors such as being *charismatic* and a *visionary* are associated with excellent nursing unit performance, demonstrated by quality and cost-effective patient care, high levels of patient and nurse satisfaction, etc. However, despite the many references surrounding leadership and organizational culture as major factors that explain the effectiveness of an organization, little is known about the *relationship* of these factors, particularly in nursing. Clearly, I am very interested in better understanding this subject. However, this will not be realized without your help. Your participation is invaluable, to me, and to our profession at large. Results of this study may provide aspiring and experienced nurse managers with the preferred leadership styles they should practice in the hospitals today. Additionally, results of this study will also provide an avenue for advancing our knowledge on leadership and organizational culture in nursing units.

Your participation in this study will include the completion of the attached questionnaire called *Nurse Manager's Demographic and Nursing Unit Profiles*. The purpose of this questionnaire is to collect information about you and your nursing unit, which includes demographics, number of beds in your unit, staffing pattern, unit accomplishments, etc.

The procedure of this study will involve the following steps:

1. You will read and understand the attached informed consent form.
2. You will complete the questionnaire at your own convenience.
3. Upon completion, you will return the completed questionnaire in the drop box located in the nurses' station.
4. You will keep the solicitation letter and the informed consent form.

Seton Hall University
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Appendix G

Solicitation Letter for Nurse Managers (Page 2)

Your participation in the research study is entirely voluntary. Return of the completed questionnaire implies your consent to participate. You may decide not to participate at any time. If you decide not to participate, you will not be penalized or lose any benefits to which you would be otherwise entitled.

You will not be asked to disclose your name on any part of the questionnaire. The above mentioned questionnaire will be coded by letters and numbers to maintain complete anonymity at all times.

The completed questionnaires and results of this study will be stored in a locked cabinet in the primary investigator's office at Seton Hall University. The primary investigator, J. Casida, is the only individual who will have access to all of the research data for a period of three years. Thereafter, all research related documents will be destroyed.

You have the option to complete the survey on any day during the next four weeks. Once you complete the survey, you will not be asked to complete it again. If you would like to know the results of the study, please feel free to contact me and I will provide you with the information.

You have the right to ask questions concerning this study at any time. If you have any questions concerning this study or your rights as a study participant, please contact the primary investigator, Jessie Casida, through the office of Dr. Genevieve Pinto-Zipp, Dissertation Advisor and Chair of Graduate Programs in Health Sciences at Seton Hall University School of Graduate Medical Education at 973-275-2076. This project has been approved by the Seton Hall University Institutional Review Board (IRB) for Human Subjects Research. The Office of the IRB at Seton Hall University may be reached at 973-313-6314.

Thank you very much for your invaluable contribution to this project.



Jesus (Jessie) Casida
Doctoral Candidate
School of Graduate Medical Education
Seton Hall University

Seton Hall University
Institutional Review Board

JUL 14 2006

Approval Date

Expiration Date

JUL 14 2007

Appendix H

Nurse Managers' Informed Consent



INFORMED CONSENT FORM FOR NURSE MANAGERS

Study Title: The Relationship of Nurse Managers' Leadership Styles and Nursing Unit Organizational Culture in Acute Care Hospitals

Affiliation

My name is Jesus (Jessie) Casida and I am a doctoral student in the School of Graduate Medical Education at Seton Hall University. Currently, I am conducting a research project that will culminate in my dissertation.

Purpose

You are being invited to participate in this research study because you are a nurse manager of a nursing unit that has demonstrated nursing excellence. Studies have shown that nurse manager leadership and organizational culture are two important factors that influence the performance of nursing units such as yours. However, the relationship of the nurse manager leadership and nursing unit culture is not clear. Further, research is needed to clearly understand such a relationship. Thus, the purpose of this study is to explore, and explain the relationship between nurse manager's leadership style and nursing unit organizational culture.

Procedure

You will be asked to complete the attached questionnaire called *Nurse Manager's Demographic and Nursing Unit Profiles*. The purpose of this questionnaire is to collect pertinent information about you and your nursing unit, which includes demographics, number of beds in your unit, staffing pattern, unit accomplishments, etc. The time required to complete this questionnaire should be no longer than 10 minutes. You will return the completed questionnaire in a drop box located in the nurses' station. Please return the questionnaire within 4 weeks of receipt.

Voluntary Participation

Your participation in this research study is entirely voluntary. You may decide not to participate at any time. If you decide not to participate, you will not be penalized or lose any benefits to which you would be otherwise entitled. Consent to participate in this study is indicated by returning the enclosed questionnaire to the primary investigator via the drop box.

School of Graduate Medical Education
 Department of Graduate Programs in Health Sciences
 Tel: 973.275.2076 • Fax: 973.275.2370
 400 South Orange Avenue • South Orange, New Jersey 07079 • gradmeded.shu.edu

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A HOME FOR THE MIND, THE HEART AND THE SPIRIT

Appendix H

Nurse Managers' Informed Consent (Page 2)

Anonymity

You will not be identified by name or description in any reports or publications about this study. A coding system, through the use of numbers and letters found in the top left hand corner of the questionnaire will be used to maintain complete anonymity at all times.

Confidentiality

All information in this study will be kept strictly confidential. All research data will be stored in a locked cabinet in the primary investigator's office at Seton Hall University. The primary investigator, J. Casida, is the only individual who will have access to all of the research data for a period of three years. Thereafter, all research related documents will be destroyed.

Risks

There is no foreseeable risk factor or discomfort of any part of this research project that will affect you.

Benefits of Participation

The results of this study may provide a direct benefit to you as a nurse manager. Such benefit may include information about the relationship of nurse managers' leadership styles and nursing unit organizational culture and the importance of this relationship to nursing unit performance. This eventually could assist you in the maintenance of nurse retention, high quality and cost-effective patient care, and patient satisfaction. Additionally, hospital administrators, educators, and nursing scholars may also gain benefits through utilization of research outcomes in the education and training of aspiring and experienced nurse managers as well as advancement of nursing leadership knowledge.

Compensation

There will be no monetary or any kind of compensation for participation in this study.

Alternative Procedures

There are no alternative ways to participate in this study.

Appendix H

Nurse Managers' Informed Consent (Page 3)

Contact Information

You have the right to ask questions concerning this study at any time. If you have any questions concerning this study or your rights as a study participant, please contact the primary investigator, Jessie Casida, through the office of Dr. Genevieve Pinto-Zipp, Dissertation Advisor and Chair of Graduate Programs in Health Sciences at Seton Hall University School of Graduate Medical Education at 973-275-2076.

This project has been approved by the Seton Hall University Institutional Review Board (IRB) for Human Subjects Research. The IRB believes that the study procedures adequately safeguard the study participant's privacy, welfare, civil liberties, and rights. The Office of the IRB at Seton Hall University may be reached at 973-313-6314.

Informed Consent

I fully understand the purposes of this study and the lack of potential risks as well as potential benefits of my participation. My consent to participate in this study is indicated by returning the completed questionnaire to the primary investigator.

Appendix I

Nurse Managers' & Nursing Unit Profile Data Collection Tool

NM _____

Nurse Manager's Demographic & Nursing Unit Profile

Please mark an X in the box to the left of the response and fill-in-the blanks with appropriate information.

Part I: Nurse Manager Demographic Profile

1. Age _____
2. Gender Male Female
3. Ethnic Background African American Asian
 Caucasian Hispanic
 Native American Other _____
4. Total number of years of acute care nursing experience _____ or
or critical care nursing experience _____
5. Number of years of nursing leadership/management experience _____
6. Total number of years in this nursing unit _____
7. Total number of years in this hospital _____
8. Specialty Certification (Please select all apply):
 CNA CNAA
 CCRN CPAN
 PCCN RN,C Other _____
9. Educational Background. Please indicate the highest degree you have earned:
 Diploma in Nursing
 Associate Degree in Nursing
 Bachelor of Science in Nursing
 Bachelor's degree in other field
 Master's degree in Nursing
 Dual Master's degree: MSN/MBA Other _____
 Master's degree in other field
 Doctoral degree in Nursing
 Doctoral degree in other field

Continued on next page

Appendix I

Nurse Managers' & Nursing Unit Profile Data Collection Tool (Page 2)

10. Have you attended any form of formal leadership training in the past year?

Yes No

If yes, please specify _____

11. Have you attended any form of formal leadership training beyond 1 year?

Yes No

If yes, please specify _____

Part II: Nursing Unit Profile

1. Total number of beds _____

2. Staffing Pattern: 8-hour shift 12-hour shift Other _____

3. Total number of staff RNs:

Days _____ Nights _____ Evenings (if indicated) _____

4. Do you rotate your nursing staff in various shifts? Yes No

5. What is the typical nurse-to-patient ratio? 1:1 1:2 1:3
 1:4 1:5 1:6
 1:7 1:8 1:9

6. Do you use unlicensed assistive personnel, i.e. patient care tech, nursing assistant, etc?

Yes No

7. Has your nursing unit received any awards or recognition in the past year?

Yes No

If yes, please specify _____

Continued on next page

Appendix I

Nurse Managers' & Nursing Unit Profile Data Collection Tool (Page 2)

8. Do you celebrate nursing unit's accomplishments?

Yes No

If yes, please indicate what type of celebration (e.g., pizza party):

Thank You Very Much

Appendix J

Reminder Note for Returning Surveys

**NOTICE**

Please be aware that the deadline for returning the completed questionnaires for the research project entitled *"The relationship of Nurse Managers' Leadership Styles and Nursing Unit Organizational Culture in Acute Care Hospitals"* is:

_____ 2006

If you have any questions, please feel free to contact me at: 973-275-2076.

Once again, thank you very much for your participation and to your contribution in this study.

Sincerely,

**Jessie Casida
Primary Investigator**

School of Graduate Medical Education
Department of Graduate Programs in Health Sciences
Tel: 973.275.2076 • Fax: 973.275.2370
400 South Orange Avenue • South Orange, New Jersey 07079 • gradmeded.shu.edu

A HOME FOR THE MIND, THE HEART AND THE SPIRIT

Appendix K

Copyright Permission: MLQ – Form 5X



855 Oak Grove Avenue, Suite 215 Menlo Park, CA 94025
650-322-6300 fax 650-322-6398 www.mindgarden.com

Date: March 1, 2006

To whom it may concern,

This letter is to grant permission for: Jesus Casida
to use the following copyright material;

Instrument: Multifactor Leadership Questionnaire 3rd Edition

Author: Bruce J. Avolio and Bernard M. Bass

Copyright: 1995, 2000, 2004 by Bernard Bass and Bruce Avolio
for her/his thesis research.

In addition, five (5) sample items from the instrument may be reproduced for inclusion in a proposal, thesis or dissertation.

The entire measure may not at any time be included or reproduced in other published material.

Sincerely,

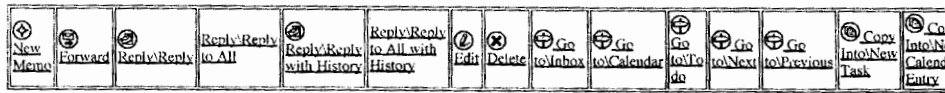
A handwritten signature in black ink, appearing to read "SDarrow".

Sandra Darrow
Director of Customer Service

Appendix L

Copyright Permission: DOCS

03/18/2006 10:59



"Ann Howell" <ahowell@denisonculture.com>
 To: "Jesus Casida" <casidaje@shu.edu>
 cc:
 12/19/2005 02:47 PM
 Subject: RE: Denison Information

Hello Jessie --

As described in the Terms of Use document, you have permission to use the DOCS items and DOCS model in your dissertation research. Good luck with your project.

Regards, Ann

Ann W. Howell, PhD
 Director of Research and Development
 Denison Consulting
ahowell@denisonculture.com
www.denisonculture.com
 (734) 302-4002

From: Jesus Casida [mailto:casidaje@shu.edu]
Sent: Saturday, December 17, 2005 1:05 PM
To: Ann Howell
Subject: Re: Denison Information

Dear Dr. Howell,

This email clarifies my request on the use of Denison Organizational Culture Survey (DOCS) and the graphic illustration of Denison Organizational Culture Model (DOCM) found in the Denison's Consulting website. You have told me several months ago that the Terms of Use document that I have submitted to you is adequate for copyright permission. However, I will feel much better if you would send me an email approving the use of DOCS and DOCM for the purposes of my dissertation.

Once again, thank you very much for your help, and I look forward to your reply.

Happy Holidays!

Jesus "Jessie" Casida

Appendix M
IRB Approvals



July 17, 2006

Jesus Casida
35-3703 Hudson Street
Jersey City, NJ 07302

Dear Mr Casida,

The Seton Hall University Institutional Review Board has reviewed your research proposal entitled "The Relationship of Nurse Managers' Leadership Styles and Nursing Unit Organizational Culture in Acute Care Hospitals" and has determined that it has exempt status.

Please note that, where applicable, subjects must sign and must be given a copy of the Seton Hall University current stamped Letter of Solicitation or Consent Form before the subjects' participation. All data, as well as the investigator's copies of the signed Consent Forms, must be retained by the principal investigator for a period of at least three years following the termination of the project.

Should you wish to make changes to the IRB approved procedures, the following materials must be submitted for IRB review and be approved by the IRB prior to being instituted:

- Description of proposed revisions;
- *If applicable*, any new or revised materials, such as recruitment fliers, letters to subjects, or consent documents; and
- *If applicable*, updated letters of approval from cooperating institutions and IRBs.

At the present time, there is no need for further action on your part with the IRB.

In harmony with federal regulations, none of the investigators or research staff involved in the study took part in the final discussion and the vote.

Sincerely,

Mary F. Ruzicka, Ph.D.
Professor
Director, Institutional Review Board

cc Dr Genevieve Pinto-Zipp

Office of Institutional Review Board
Presidents Hall
Tel: 973.313.6314 • Fax: 973.275.2361
400 South Orange Avenue • South Orange, New Jersey 07079-2641

Appendix M

IRB Approvals (Page 2)



RONALD J. DEL MAURO
President and Chief Executive Officer
Saint Barnabas Health Care System

NANCY L. WOLLEN, RN, BSN, MBA, CHE
Executive Director
Community Medical Center

June 12, 2006

Jesus M. Casida, MSN, RN
35-3703 Hudson Street
Jersey City, New Jersey 07302

RE: IRB# 06-007
"The Relationship of Nurse Managers' Leadership Styles and Nursing
Unit Organizational Culture in Acute Care Hospitals"

Dear Mr. Casida:

The above referenced protocol was submitted to the Institutional Review Board of Community Medical Center for Initial Review and met the requirements of Expedited Review Category 7. This protocol was reviewed on May 15, 2006 and approved on its scientific, safety, ethical and socio-economical merits in accordance with Institutional and Federal regulations of the Institutional Review Board.

This approved initial review will be subject to review within twelve (12) months of the above approval date by the Community Medical Center Institutional Review Board. Please note that this approval will expire on **May 14, 2007**.

The full Institutional Review Board of Community Medical Center was notified of this approval at the June 5, 2006 meeting and is reflected in the minutes.

Sincerely,

Lauren Burke, RN, MSN, CNA, BC, Acting Chairman
Institutional Review Board

LB\trn



Appendix M

IRB Approvals (Page 3)



RONALD J. DEL MAURO
President and Chief Executive Officer
Saint Barnabas Health Care System

FRANK J. VOZOS, MD, FACS
Executive Director
Monmouth Medical Center
(732) 222-5200

June 13, 2006

Cynthia Marvulli, RN
Nursing Research
Monmouth Medical Center
300 Second Avenue
Long Branch, NJ. 0774-

RE: IRB Study # 06-031

Dear Ms. Marvulli:

Meeting Date: 6/12/2006 **At:** Monmouth Medical Center

Protocol Title

The Relationship of Nurse Managers' Leadership Styles and Nursing Unit Organizational Culture in Acute Care Hospitals

To advise you that the above referenced Study has been presented to the Institutional Review Board identified above, and the following action taken subject to the conditions and explanation provided below.

Cynthia Marvulli is the primary investigator at Monmouth Medical Center with Jesus (Jessie) Casaida, RN, and Co-Investigator. The IRB requires that the primary investigator of all protocol be an employee of MMC.

Internal #: New Appl

Expiration Date:

On Agenda For: Initial Submission

Reason 1:

Description Date Received- 6/12/2006

IRB ACTION: Exempted

Action The IRB reviewed this study and determined it was exempt from IRB follow-up and

Explanation: Privacy Board review. The study does not involve human subjects or protected data. (6 approved, 0 abstained, 0 against)

Sincerely yours,


Joseph Jaeger
Acting Chairman, Institutional Research Review Board

300 SECOND AVENUE ■ LONG BRANCH, NEW JERSEY 07740 ■ (732) 222-5200

Saint Barnabas Health Care System - New Jersey's health care leader.



Appendix M

IRB Approvals (Page 4)



RONALD J. DEL MAURO
President and Chief Executive Officer
Saint Barnabas Health Care System

IRB Approval

Date: May 16, 2006

To: Jesus Casida, RN
Nursing

Re: IRB # 2006.47
The relationship of nurse managers' leadership styles and nursing unit organizational culture in acute care hospitals.

Dear Mr. Casida,

The above referenced study (2006.47) was reviewed and granted expedited approval by the NBIMC Institutional Review Board on May 16, 2006. The protocol, two consent forms, two letters to study participants, HIPAA Authorization waiver form, unaffiliated investigator agreement, questionnaire - 5X form, survey, data collection tool are now approved and research activities may be initiated.

Please take note of the following:

Expiration date: May 15, 2007

A request for extension must be completed at least 30 days prior to the above expiration date.

Amendments

Any changes in study procedures, subject population, recruitment or the consent process must be submitted for IRB approval **prior** to implementation.

Serious Adverse Events

- a. Any fatalities or life threatening adverse events related or possibly related to the research, occurring in an NBIMC subject must be reported to the IRB within 24 hours.
- b. Non-fatal or non-life threatening serious adverse events occurring in a NBIMC subject must be reported to the IRB within ten (10) working days.
- c. Non-NBIMC reports (ex. sponsor safety sheets) must be submitted to the IRB office within thirty (30) days of receipt.

Thank you for your cooperation.

Alan J. Lippman, MD, CIP
Chair, Institutional Review Board

Appendix M

IRB Approvals (Page 5)



RONALD J. DEL MAURO
Chairman
Board of Trustees

July 13, 2006

Jesus Casida, R.N.
Department of Nursing
Saint Barnabas Medical Center
94 Old Short Hills Road
Livingston, New Jersey 07039

**RE: IRB NUMBER 06-51 - EXPEDITED REVIEW: THE RELATIONSHIP OF
NURSE MANAGERS' LEADERSHIP STYLE AND NURSING UNIT
ORGANIZATIONAL CULTURE IN ACUTE CARE HOSPITALS**

Dear Mr. Casida:

I have reviewed the above named protocol and HIPAA Tool #3 (Waiver of HIPAA Privacy Authorization) and I am granting expedited approval.

IRB regulations require submission of an annual report and prompt notification of untoward events. At the completion of your study a final report should be submitted.

**EXPIRATION DATE: 7/12/07 - A REQUEST FOR EXTENSION MUST BE
SUBMITTED TO THE IRB OFFICE AT LEAST 30 DAYS PRIOR TO THE
EXPIRATION DATE. PLEASE COMPLETE ATTACHED ANNUAL REPORT
FORM AND RETURN TO THE IRB OFFICE BY MAY 22, 2007.**

Sincerely,

Robert L. Goodman, M.D.
Chairman, IRB

OLD SHORT HILLS ROAD ■ LIVINGSTON, NEW JERSEY 07039 ■ (973) 322-5000

Saint Barnabas Medical Center is a major teaching affiliate of Mount Sinai School of Medicine, New York

