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Leadership-Organizational Culture Relationship in Nursing Units of Acute Care Hospitals

EXECUTIVE SUMMARY

► The phenomena of leadership and organizational culture (OC) has been defined as the driving forces in the success or failure of an organization.

► Today, nurse managers must demonstrate leadership behaviors or styles that are appropriate for the constantly changing, complex, and turbulent health care delivery system.

► In this study, researchers explored the relationship between nurse managers' leadership styles and OC of nursing units within an acute care hospital that had achieved excellent organizational performance as demonstrated by a consistent increase in patient satisfaction ratings.

► The data from this study support that transformational and transactional *contingent reward* leaderships as nurse manager leadership styles that are associated with nursing unit OC that have the ability to balance the dynamics of flexibility and stability within their nursing units and are essential for maintaining organizational effectiveness.

► It is essential for first-line nursing leaders to acquire knowledge and skills on organizational cultural competence.

OVER THE PAST SEVERAL DECADES, the phenomena of leadership and organizational culture (OC) continue to predominate in mainstream business and health care literature. Scholars in various disciplines have defined these phenomena as the driving forces in the success or failure of an organization (Schein, 2004). Although, leadership and OC constructs have been studied well, its relationship, however, is not definitively established in nursing literature. Previous studies in the nursing literature have been concerned mainly with the leadership role of the chief nurse executive, with little attention to first-line nursing leadership, such as nurse managers (NMs).

Effective organizations have first-line leaders that demonstrate transformational leadership behaviors (Al-Mailam, 2005; Block, 2003). A leader, such as a NM who 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 health care changes and interacting with others inside and outside of the organization (Robbins & Davidhizar, 2007). Today, NMs must demonstrate leadership behaviors or styles that

are appropriate for the constantly changing, complex and turbulent health care delivery system. 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). Additionally, 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; Robbins &

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Davidhizar, 2007). Despite these difficulties, this strategy must result in high-quality, cost-effective patient care, accompanied by high levels of patient satisfaction. Improvement of client services (in health care, *the patient*; in business, *the customer*) is the ultimate goal of leadership in an institution (Al-Mailam, 2005; Vance & Larson, 2002). Utilizing the transformational leadership style is a strategy that can assist NMs in achieving these goals as well as address the challenges of the current health care climate (Tourangeau & McGilton, 2004).

Organizational culture is a significant variable influencing organizational performance, such as organizational effectiveness (Denison, Haaland, & Goelzer, 2003). Research that addresses the link between OC and effectiveness in nursing context, however, is limited. The majority of the nursing literature that addresses OC includes assessment, diagnosis, or evaluation of nursing unit cultures is outdated. Moreover, those studies were carried out before and after implementation of organizational change (Forsythe, 2005), performance improvement (Baker, King, MacDonald, & Horbar, 2003), patient care delivery models (Jones, DeBaca, & Yarbrough, 1997), and innovations in nursing units (Coeling & Simms, 1993). Today, NMs play a pivotal role in driving the success or failure of hospitals' nursing units, which in turn, affects the global performance of acute care hospitals. In the current health care environment, patient safety, quality, and cost-effective patient care and patient satisfaction occupy the top priorities of health care organizations' strategic plan. Alignment of the nursing units' OC with the hospital's strategic plan is essential in achieving the hospital's goals and objectives.

Leadership and OC are two important explanatory constructs influencing organizational performance (Burke & Litwin, 1992). For nearly 2 decades, nurses have been investigating these constructs and their implications to nursing practice (Garret, 1991; McDaniel & Stumpf, 1993). They found that leadership and OC are two important variables affecting organizational outcomes. For example, NMs who have used transformational leadership styles have shown a positive impact on organizational outcomes (Robbins & Davidhizar, 2007) such as on work environment (Whiley, 2001) and staff nurse retention (Kleinman, 2004a). Moreover, a nursing service or unit that typifies a *constructive* OC showed high levels of patient satisfaction (Wooten & Crane, 2003); while a *hierarchical* or bureaucratic type of OC negatively impacts nurses' retention and quality of work life (Gifford, 2002). Clearly, leadership and OC impact organizational performance. However, despite the many references in mainstream business and health care literature about such an impact, no research has been done to examine the relationship of NMs' leadership styles and nursing unit OC.

Thus, the purpose of this study was to explore the relationship between NMs' leadership styles and OC of nursing units within an acute care hospital that had achieved excellent organizational performance as demonstrated by a consistent increase in patient satisfaction ratings. In this context, the full-range leadership theory (FRLT) and the Denison's Organizational Culture Model (DOCM) were used as a conceptual framework. The FRLT (see Table 1) describes three broad categories of leadership behaviors that are highly transformational at one end to highly avoidant at the other end: *transformational* (TF), *transactional* (TS), and *non-transactional laissez-faire* (LF) leadership (Antonakis, Avolio, & Sivasubramaniam, 2003; Avolio & Bass, 2004). The DOCM (Table 2) describes four OC traits that are characteristics of organizational effectiveness including *adaptabil-ity, involvement, consistency*, and *mission* (Denison, 2005; Denison et al., 2003).

The lack of empirical finding and the need to clearly understand the leadership-culture relationship phenomena in nursing was addressed by a research question: *Does a relationship exist between the NMs' leadership styles and nursing unit's OC as perceived by staff nurses?* Based on this, a main hypothesis (H) was framed, which postulated that there is an existing relationship between NMs' leadership styles and nursing unit OC as perceived by staff nurses (SNs). This *H* was expanded into sub-hypotheses to further examine the nature of the leadership-culture relationship phenomena in nursing by determining which NM leadership style is associated with the nursing unit OC's internal and external environment attributes. These included: (*Ha*) SNs' perceptions of their nursing units' OC in terms of mission and adaptability are positively associated with the level of their NM's TF leadership; and (*Hb*) SNs' perceptions of their nursing units' OC in terms of involvement and consistency are positively associated with the level of their NM's TS leadership.

Methods

Descriptive and exploratory correlational designs were used to describe the types of NMs' leadership styles and OC of the sample. The nature of the relationship between the NMs' leadership styles and nursing unit's OC were systematically examined within the organizational performance framework.

Variables and measurement instruments. The independent variable in this study is *leadership style* as measured by the Multifactor Leadership Questionnaire (MLQ) Form 5X-Short. The MLQ is a reliable and valid instrument that has been used extensively in various levels and types of organizations. It measures three distinc-

Table 1.
Summary of the Full-Range Leadership Theory

Leadership Dimensions and Key Elements	Definitions
Transformational (TF) Leadership	The ability to influence others toward achievement of extraordinary goals by changing the followers' beliefs, values, and needs.
Idealized influence (attributed)	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.
Idealized influence (behavior)	The charismatic actions of the leader that are centered on values, beliefs, and a sense of mission.
Inspirational motivation	The ways leaders energize their followers by viewing the future with optimism, stressing ambitious goals, projecting an idealized vision, and communicating to followers that vision is achievable.
Intellectual stimulation	The leader actions that appeal to followers' sense of logic and analysis by challenging followers to think creatively and find solutions to difficult problems.
Individualized consideration	The leader behavior that contributes to followers' satisfaction by advising, supporting, and paying attention to the individual needs of followers, and thus allowing them to develop and self-actualize.
Transactional (TS) Leadership	Is the exchange process based on the fulfillment of contractual obligations and is typically implemented by setting objectives, monitoring, and controlling outcomes.
Contingent reward	The leadership behaviors focused on clarifying role and task requirements and providing followers with material or psychological rewards contingent on the fulfillment of contractual obligations. This is also referred to as constructive transactions.
Management-by-exception (active)	The active vigilance of a leader whose goal is to ensure that standards are met. It is also referred to as active corrective transactions.
Management-by-exception (passive)	This leadership behavior refers to leaders that only intervene after non-compliance has occurred or when mistakes have already happened. It is also referred to as passive corrective transactions.
Non-Transactional Laissez-faire (LF)	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. It is considered active to the extent the leader "chooses" to avoid taking action.

NOTE: Adapted from Antonakis et al., 2003; Avolio & Bass, 2004.

Table 2.
Summary of The Denison's Organizational Culture Model

Culture Traits	Definitions
Adaptability	This refers to the organization's ability to translate the demands of the business environment into action. It 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. Generally, employees have the sense of creating change, customer focus, and organizational learning.
Mission	This 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. It provides a clear direction and goals that serve to define an appropriate course of action for the organization and its members. Generally, employees have the sense of strategic direction and intent, goals and objectives, and vision of the organization.
Involvement	This 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, thereby, resulting in greater organizational commitment and an increasing capacity for autonomy. Employees, generally, have the sense of empowerment, team orientation, and capability development.
Consistency	Defines the values and systems that are the basis of a strong culture. It provides a central source of integration, coordination, and control. Also, it characterizes organizations that create internal systems of governance based on consensual support. Generally, employees have shared core values, and demonstrate agreement, coordination, and integration.

NOTE: Adapted from Denison, 2005.

tive types of leadership styles (TF, TS, and LF), which uses a 5-point 0-4 Likert scale (0 = not at all, 1 = once in a while, 2 = sometimes, 3 = fairly often, and 4 = frequently, if not always). The present study used 36 items, which represent and measure the key aspects of the three leadership constructs as described by the FRLT (Avolio & Bass, 2004). Numerous studies have shown that the reliability of the MLQ has been consistently strong with the Cronbach alpha of > 0.90 (Avolio & Bass, 2004). Current validity reports on the MLQ included the use of confirmatory factor analysis, which shows a confirmatory factor index (CFI) of 0.91, and a goodness of fit index of 0.92 (Antonakis et al., 2003; Avolio & Bass, 2004).

The dependent variable in this study is nursing unit OC as measured by the Denison's Organizational Culture Survey (DOCS). It is also a reliable and valid instrument that has been used in similar settings as with the MLQ, and measures four types of OC culture traits (adaptability, involvement, consistency, and mission) as described by the DOCM (Denison, 2007). The DOCS consists of 60 items, which asks respondents to describe their OC using a 5-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = somewhat agree, and 5 = strongly agree). Current psychometric property report of DOCS included Cronbach alphas of 0.87 to 0.92 for the four culture traits and a CFI of 0.99 suggesting robust construct validity (Denison, Janovics, & Young, 2005).

Sample and setting. A convenient sample of NMs and staff registered nurses from the four acute care hospitals of the largest health care system in New Jersey participated in this study. Despite the fact that the sample was drawn from four hospitals, one underlying assumption of this study was that the sample represented a population of a single organization in which all members of the organi-

zation share the same philosophy, mission, and core values.

Procedure. Upon receipt of the institutional review boards' approvals to conduct research, the primary investigator (PI) obtained Nursing Report Card (NRC) data for the nursing units of the participating hospitals. The PI reviewed each NRC and ensured that the nursing unit had met the inclusion criteria such as a documented organizational effectiveness, as demonstrated by *good perform-ance* ratings on quality of care and patient satisfaction during the first and second quarters of 2006. A *good performance* rating means that the nursing unit has met or exceeded the health care system's benchmark in a particular criterion measure (Holocek, 2005).

Upon determining the eligible nursing units, research packets were distributed by the PI to the study participants via their mail boxes. In the solicitation letter, the following inclusion criteria were required or noted: (a) a NM who has been in his or her position in the same nursing unit for at least 6 months or more; (b) the nursing unit is staffed by 15 or more staff nurses (SNs); and (c) a full-time, day shift SN who has worked and reported to the same NM 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: 19 in northern NJ and 18 in southern NJ. A total of 400 research packets for SNs were distributed in all of the four participating hospitals (100 per hospital).

The packets included survey instruments (MLQ and DOCS) and a demographic profile. SNs were instructed to complete these surveys before the start of their shifts. Additional instruction included: (a) surveys must be completed in a quiet room, with the door closed, and free from distraction, and (b) completed sur-

veys must be returned to the PI via the drop box located in the nurses' station. The NMs' demographic data were collected in the same manner as the SNs.

Data collection was terminated 1 month following the date of the initial distribution of research packets. At the 30 day mark, the PI retrieved the contents in the drop boxes, which subsequently were entered into the Statistical Package for the Social Sciences (SPSS) Version 14.0 spreadsheet (SPSS, 2005). Descriptive statistics were utilized to calculate means, frequency distributions, and standard deviations of study participants' demographics, MLQ and DOCS scores. A zero-order correlation was used to test the research hypotheses at the 0.01 alpha levels. Protection of privacy and confidentiality were maintained throughout the duration of this study.

Results and Significance of the Findings

Characteristic of the sample. All 37 NMs who consented to participate in this study returned the surveys. They were primarily Caucasian, females, with a mean age of 45.7 years. Additionally, they were experienced clinicians and leaders. The majority of the NMs had baccalaureate degrees, certified in their clinical specialties, and had completed formal leadership training from various educational settings. Of the 400 SNs, 278 (69.5%) consented to participate in this study, and returned the surveys. The majority of the SNs were Caucasian, females, with a mean age of 40.9 years. Of the ethnic minority groups, Asians were highly represented when compared to African-Americans, Hispanics, and Native Americans. Additionally, they were also experienced clinicians and had baccalaureate degrees. However, less than half (39%) of the SNs were certified in their clinical specialties. Both NMs and SNs were employed in the same hospital and same nursing units

for several years. Table 3 offers a summary of the demographic characteristics of the sample.

Hypotheses. Scores for NMs' leadership styles were obtained by calculating the global TF (*M*=2.8, *SD*=0.83), TS (*M*=2.1, *SD*=0.47), LF (*M*=0.83, *SD*=0.90) scores on MLQ rated by their SNs. These leadership scores were correlated with the SNs' ratings on their nursing unit OC, which was obtained by calculating the global score on the DOCS (*M*=3.6, *SD*=0.58). Correlational analyses showed that statistically significant correlations existed between leadership and OC variables. TF leadership showed a positive, moderately strong correlation with OC (*r*=0.60, *p*=0.00), while TS leadership showed a positive, but little or weak correlation with OC (*r*=0.16, *p*=0.006). Conversely, LF leadership showed a negative correlation with OC (*r*= -0.34, *p*=0.000). Based on these data, the hypothesis was supported, that there is an existing relationship between NMs' leadership styles and nursing unit OC as perceived by SNs.

The correlation between TF leadership and nursing unit OC scores was significantly higher than the correlation among TS leadership, LF leadership, and DOCS scores (see Table 4). Thus, the relationship between the TF leadership styles of NMs and the high levels of OC traits could be inferred to the organizational effectiveness of the sample, as demonstrated by their *good performance ratings* in the health care system's NRC.

Furthermore, the significant, negative correlations between LF leadership scale and four OC traits suggest that the absence of leadership or absence of significant purposeful interactions between the leader and employees (Avolio & Bass, 2004; McGuire & Kennerly, 2006) does not shape or create any type of nursing unit OC. As a result, the ineffective interaction brought about by LF leaders contributes to poor organizational performance (McGuire & Kennerly, 2006).

Ha: The results of the correlational analyses presented in Table 4 showed that TF leadership scale and factors were all positively correlated with *mission* and *adaptability*. Thus, these data support the sub-hypothesis that SNs' perceptions of their nursing units' OC in terms of mission and adaptability are positively associated with the level of their NM's TF leadership.

These findings suggest that a NM who frequently displays TF leadership behavior to his or her nursing staff is likely to be associated with a positive, desirable, and flexible nursing unit OC in which *mission* and *adaptability* culture traits dominate. According

Table 3.
Nurse Managers' and Staff Nurses' Demographics

Characteristics	Nurse Managers (N=37)		Staff Nurse (N=278)	
	Mean	SD	Mean	SD
Age (years)	45.7	8.7	40.9	10.2
Years of clinical experience	21.9	8.9	14.8	10.3
Years of leadership experience	9.2	7.2	N/A	N/A
Years in same nursing unit	8.8	7.4	7.9	6.8
Years in same hospital	12.1	7.4	10.3	8.2
	Percent (%)			
Gender				
Male	5.4		7.6	
Female	94.6		91.0	
No response	-		1.4	
Ethnicity/Race				
African American	2.7		5.8	
Asian	18.9		30.2	
Caucasian	75.5		54.3	
Hispanic	2.7		3.2	
Native American	-		0.4	
Other (e.g., multi-racial)	-		3.2	
No response	-		2.9	
Specialty Certification				
Certified	64.9		38.8	
Not Certified	35.1		61.2	
Highest Educational Degree				
Diploma in nursing	8.1		12.9	
Associate degree in nursing	13.5		21.6	
Baccalaureate degree in nursing	35.1		55.8	
Baccalaureate degree in other field	5.4		3.2	
Master's degree in nursing	24.3		3.2	
Master's degree in other field	13.5		1.1	
Formal Leadership Training*			N/A	
Yes	83.8			
No	16.2			

NOTE: SD = standard deviation (±), N/A = not applicable
 * Denotes attendance in various leadership training programs within the past year of data collection.

Table 4.
Correlations between Nurse Managers' Leadership and Organizational Culture Traits as
Perceived by Staff Nurses (N=278)

Nurse Managers' Leadership Styles (MLQ Scales and Factors)	Nursing Unit Organizational Culture (DOCS)							
	Involvement		Consistency		Adaptability		Mission	
	r	p	r	p	r	p	r	p
Transformational Leadership	0.51	0.000*	0.59	0.000*	0.51	0.000*	0.49	0.000*
Idealized influence (attributed)	0.46	0.000*	0.55	0.000*	0.46	0.000*	0.44	0.000*
Idealized influence (behavior)	0.47	0.000*	0.54	0.000*	0.44	0.000*	0.40	0.000*
Inspirational motivation	0.42	0.000*	0.50	0.000*	0.46	0.000*	0.49	0.000*
Intellectual stimulation	0.45	0.000*	0.54	0.000*	0.48	0.000*	0.45	0.000*
Individualized consideration	0.49	0.000*	0.52	0.000*	0.45	0.000*	0.43	0.000*
Transactional Leadership	0.16	0.000*	0.19	0.000*	0.13	0.000*	0.09	0.000*
Contingent reward	0.51	0.000*	0.54	0.000*	0.48	0.000*	0.42	0.000*
Management-by-exception (active)	0.07	0.250	0.15	0.012*	0.12	0.049	0.10	0.092
Management-by-exception (passive)	-0.34	0.008*	-0.41	0.000*	-0.40	0.000*	-0.40	0.000*
Laissez-faire Leadership	-0.28	0.000*	-0.34	0.000*	-0.28	0.000*	-0.30	0.000*

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

to Denison (2005), organizations with a dominant *adaptability* trait enable the members of the organization, such as 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 DOCS also measures the external dynamics of the organization's *adaptability* and *mission* traits. This organizational attribute focuses on the relationship between the organization and the external environment (Denison, 2005; Denison et al., 2003), which is essential in achieving desirable organizational outcomes. Inference could be drawn that such OC 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 (see Table 4). The existence of such a

dynamic could be attributed to having SNs who are less resistant to change, are able to adapt to the demanding health care climate, and are able to meet the demands of consumers (patients and patients' families).

Given the turbulent health care climate today, NMs are constantly challenged in maintaining nursing staff job satisfaction, a healthy work environment, and retention. To achieve and maintain organizational effectiveness in the current health care delivery system, a nursing unit needs high levels of *adaptability* and *mission* traits and a NM who frequently utilizes TF leadership behaviors. Therefore, 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. Nurse managers who build such cultures and articulate them to followers (SNs) typically exhibit a sense of vision and purpose. Furthermore, NM's transformational leadership enables SNs to have a clear understanding of the various external forces affecting

contemporary nursing practice.

Key aspects of TF leadership include *inspirational motivation* and *individualized consideration* (see Table 1). 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). These leadership skills allow SNs to accomplish extraordinary goals despite the prevailing turbulent health care dynamics. Therefore, a NM who possessed TF leadership skills is the preferred leader in shaping a nursing unit OC responsive to the current health care climate.

Hb: The results of the correlational analyses presented in Table 4 show that the TS leadership scale was positively correlated, but showed little or weak correlations with *involvement* and *consistency* traits. However, of the three TS leadership factors, contingent reward showed positive, moderate strong correlations with *involvement* and *consis-*

tency while *management-by-exception (passive)* showed negative correlations with involvement and consistency. Moreover, *management-by-exception (active)* showed a positive, weak, or little correlation with consistency, but no correlation with the *involvement* trait. Thus, these data partially supported the hypothesis that SNs' perceptions of their nursing units' OC in terms of involvement and consistency are positively associated with the level of their NM's TS leadership.

Although TS leadership can be successful and is essential in certain organizations, such as in military units (Avolio & Bass, 2004), findings from the present study appear to suggest that TS leadership, generally, is not associated with desirable nursing units' OC as measured by DOCS. In the present study, TS leadership accounts for 2.26% of the variance of the DOCS, suggesting a weak correlation. This very small variance also implies that TS leadership in general may not be the preferred leadership style that NMs use frequently, as perceived by their SNs, and may not influence nursing units' organizational effectiveness.

However, further evaluation of TS 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 for first-line leaders like NMs. It is noteworthy that the focus of *contingent reward* leadership is to clarify the roles and task requirements of the followers (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 OC characterized by *involvement* and *consistency* traits.

In the present study, not all of the TS leadership factors positively correlated with the SNs' perceptions of their nursing units' OC in terms of *involvement* and *consistency*. Only *contingent reward* showed positive, moderate, and significant correlation with *involvement* and *consistency* traits (see Table 4). Although TS 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 usually associated with positive organizational outcomes. TS leadership such as *contingent reward* augments the effect of TF leadership (Avolio & Bass, 2004); and the ultimate outcome of *contingent reward* leadership is the enhancement of SN's role clarity, job satisfaction, and improved performance (McGuire & Kennerly, 2006).

In summary, the TF leadership style of the NM is positively related with nursing unit OC, while TS leadership has little relationship with the nursing unit OC, and LF leadership is negatively related to nursing unit OC. The convergence of the findings of the present study with a similar published study in the field of business (Block, 2003) inform us that TF leadership is the leadership style that NMs' could use as a leverage in shaping a patient care unit culture that typifies the four culture traits that link to organizational effectiveness. Nurse managers 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.

Limitations

Research has limitations. The present study is no exception. Limitations of the study design, measurement, and sampling caution one not to draw definitive conclusions and generalizations from the findings. Although findings of this study demonstrated the empirical evidence supporting a relationship between leadership and OC, 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. Furthermore, 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. Finally, limitations also exist with the external validity. Findings of the study may not be generalized to nursing units outside the health care system of the sample.

Conclusion

The present study was conceptualized around the framework of leadership and organizational culture as explanatory constructs of organizational performance. As a result, the leadership styles of NMs were associated with certain types of OC traits in high-performing nursing units as demonstrated by quality nursing care and patient satisfaction. From a general organizational performance standpoint, it could be suggested that the TF leadership style of a NM is likely to create or shape an effective nursing unit OC characterized by high levels of cultural traits (mission, adaptability, involvement, and consistency). The TS *contingent reward* leadership of the NM is likely to create or shape certain culture traits (for example, consistency and involvement) essential for the internal operations of the nursing unit, which augments the effect of TF leadership styles of a NM. Conversely, the LF 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. The data from this study support that TF and TS *contingent reward* leaderships as the NMs' leadership styles that are associated with nursing unit OC that have the ability to balance the dynamics of flexibility and stability within their nursing units and are essential for maintaining organizational effectiveness.

Implications

Aspiring and experienced NMs' understanding of the leadership-culture relationship enable them to lead effectively, influence and shape a nursing unit's OC that is responsive to the external and internal demands of health care, 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 nurse manager to tailor leadership strategies that will create a positive impact in a nursing unit's performance.

Achieving the required leadership strategies and OC cannot be accomplished through experience alone or by virtue of having leadership characteristics (for example, "people skills") innate to the new or aspiring nurse leader. A novice NM must be taught, coached, and mentored on the 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 (Robbins & Davidhizar, 2007). As such, the lack of leadership knowledge and skills has resulted in negative nursing unit organizational outcomes and NMs' role failures (Grindel, 2003; Robbins & Davidhizar, 2007). 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 (2003), "leadership is a learned skill," therefore, it can be taught and developed. Nurse executives, such as 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 NMs 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 health care organizations that sponsor leadership workshops and seminars exclusively for 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 performance.

To date, this research is the only investigation on the leadership and organizational culture relationship within the organizational performance framework of acute care hospital nursing units. 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. Although findings of the present study do not imply leadership and OC causation, one could be guided by the understanding of its association described here. Despite the limitations inherent to this study, research findings could be utilized in various areas of nursing such as in education, practice, and research. Furthermore, the findings of this study may be used by other investigators in operationalizing concepts of OC and effectiveness in nursing, in which *business* terms are used, thus, easily translated and applied to the "real world" (Denison, 2007).**$**

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