The Relationship of Leadership Style and Types of Organizational Cultures to the Effectiveness and Employee Satisfaction in Acute Care Hospital

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By

Richard Kathrins

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Dissertation Committee:

Dr. David Hunt, Ph.D., Chairperson

Dr. Kenneth Leight

Dr. Nora Palugod

UMI Number: 3252355

ProQuest Information and Learning Company
300 North Zeeb Road
P.O. Box 1346
Ann Arbor, MI 48106-1346

TOURO UNIVERSITY INTERNATIONAL
COLLEGE OF BUSINESS ADMINISTRATION
CYPRESS, CALIFORNIA 90630

THE RELATIONSHIP OF LEADERSHIP STYLE AND TYPES OF ORGANIZATIONAL CULTURES TO THE EFFECTIVENESS AND EMPLOYEE SATISFACTION IN ACUTE CARE HOSPITALS

This dissertation, written by

Richard Kathrins

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Approved by: Edith Neumann
Dr. Edith Neumann, Vice President for Academic Affairs

Dr. Paul Watkins, Dean

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We, the undersigned, certify that we have read this dissertation and approve it as adequate in scope and quality for the Doctor of Philosophy.

Dissertation Committee:

Dr. David M. Hunt, Chair

Dr. Kenneth Leight, Member

Nora Palugod
Dr. Nora Palugod, Member

DEDICATION

To the one person who has shown me the meaning of life…

and who is the love of my life…

my wife Bess

To the two people who are a source of great pride, enjoyment, and inspiration

my children Marty and Dana

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ABSTRACT

The Relationship of Leadership Style and Types of Organizational Cultures to the Effectiveness and Employee Satisfaction in Acute Care Hospital

Richard Kathrins

Touro University International

Acute care hospitals exist within an increasingly competitive and regulated environment. These challenges are placing acute care hospitals under stress and are requiring these organization's leaders to align themselves with new initiatives including adjustments to both leadership styles and types of organizational cultures. The purpose of this study was to examine the impact of leadership styles and types of organizational cultures on organizational outcomes in acute care hospitals. This research studied the prevalence of transformational and transactional leadership styles and type of organizational cultures within the organizations. A conceptual model, based upon the work of Bass and Avolio (1993) suggested that congruency between leadership styles and types of organizational culture; would lead to improved organizational outcomes, including organizational effectiveness and employee satisfaction.

This research asked employees from eight acute care hospitals to rate their individual hospital's leadership styles and types of organizational culture. In addition, the 107 employees reported demographic data. The research utilized a Multifactor Leadership Questionnaire (Form 5X) to assess the leadership style and the Organizational Description Questionnaire to assess the organizations type of culture.

Analysis included multiple regression, and a path analysis to determine causality between the variables. The results indicated that employees perceived that congruency between leadership style and type of organizational culture resulted in high levels of organizational outcomes. Incongruency between the independent variables resulted in lower organizational outcomes. The findings also revealed that within each hospital multiple styles of leadership and types of organizational culture existed. The analysis also suggested that multiple styles and types of cultures were a normal and regular finding.

The results of this study indicate that hospitals should evaluate leadership styles as well as their organization's type of culture. The hospital's leaders should also create a process for predicting which departments or job roles should be transformational versus transactional. The leaders should also develop programs to implement changes as appropriate.

CHAPTER ONE – INTRODUCTION

The statement of the problem

The purpose of this study was to investigate the relationship between leadership styles and types of organizational cultures to acute care hospital outcomes. In today's healthcare environment, acute care hospitals are facing an increasingly competitive and regulated environment and must create dynamic and adaptable organizations to ensure success. These challenges are placing acute care hospitals under stress and are requiring these organization's leaders to align themselves with new initiatives including adjustments to both leadership styles (Dubinsky, Yammarino, Jolson & Spanagler, 1995) and types of organizational cultures (Classen, 2000; Kazemek, 1990 a; Kuchinke, 1999; Lauer, 2004; Larson, 2002b). There is limited research on the relationship between leadership styles and types of organizational cultures to operational outcomes (Classen, 2000; Kazemek, 1990 a; Kuchinke, 1999; Lauer, 2004; Scott-Cawiezell, et al., 2004). In sum, there is paucity of research on the impact of leadership styles and organizational cultures in the health care literature and especially with regard to acute care hospitals, which are the focus of this study.

A number of conceptual models have documented the relationship between leadership styles and types of organizational cultures; however, they have not been empirically researched (Hofstede, Neuijen, Ohavy & Sanders, 1990; Bass, 1985; Shein, 1992). Other investigators have researched the relationship between leadership styles and types of organizational cultures (Howard, 2004; Eppard, 2004), as well as the effect of leadership styles on organizational outcomes (McGuire, 2003). However, these

studies only examined transformational leadership styles and used varying classifications for types of organizational cultures.

Bass and Avolio (1993) proposed a conceptual model (see Figure 1) that related a full spectrum of leadership styles and types of organizational cultures, which lead to, improved organizational outcomes including organizational effectiveness and employee satisfaction. Their model used the seminal work of Burns (1978). Burns (1978) first defined transformational and transactional leadership styles. Bass and Avolio (1993) expanded on the leadership styles defined by Burns and described new transformational and transactional types of organizational cultures. These elements were the framework for their conceptual model.

Bass (1985) initially defined leadership styles as transformational and transactional on opposite ends of a leadership scale. He noted that transactional leaders motivated their employees to complete assigned tasks by the use of rewards for services provided (Bass, 1985; Bass, 1997; Bass & Avolio, 1994). The transformational leader on the other extreme stimulated, aroused, inspired the employee to exceed the expectations of their leader (Bass, 1985; Bass, 1997; Bass & Avolio, 1994; Dubinsky, et al, 1995). Transformational and transactional leadership styles on opposite ends of the leadership scale demonstrated separate leadership dimensions (Burns, 1978).

Organizational cultures are a set of institutional wide beliefs, values, assumptions, and behaviors shared by their employees (O'Reilly, Chatman & Caldwell, 1991; Yousef, 1998a; Fischer, 2000). As an example, Bass and Avolio (1993) define two opposing types of organizational cultures, transformational and transactional. In defining these types of organizational cultures, Bass and Avolio (1993) noted that

transactional type of organizational culture focused on contractual relationships that concentrate on employee compliance with job duties as a condition of employment. The authors define transformational type of organizational culture in environments where there is a general sense of purpose, family, and commitment (Bass & Avolio, 1993). In this type of organizational culture, the leaders and followers share interests and a corporate mission.

Specifically, this research applied the Bass and Avolio (1993) model to the study of leadership styles and types of organizational cultures in acute care hospitals. The Bass and Avolio (1993) model used for this research provided a full spectrum of leadership styles and was the only model that relates a corresponding set of organizational cultures. The model used individual measurement tools to identify different types of leadership styles and organizational cultures (Bass & Avolio, 1993). This study also used these measurement tools (Bass & Avolio, 1993; Avolio, Bass & Jung, 1999; Parry & Proctor-Thomson, 2003).

The conceptual model by Bass and Avolio (1993) also reasoned that congruent relationships between leadership styles and types of organizational cultures might result in positive organizational outcomes (Bass & Avolio, 1993; Kazemek, 1990a; Schwartz, Tumblikin & Peskin, 2002). Organizational outcomes include organizational effectiveness and employee satisfaction (Wallach, 1983; Bass & Avolio, 1993; Shein, 1995; Bass, 1999; Cameron & Quinn, 1999; Lok & Crawford, 1999; Shaw, 2002; Balhazard & Cooke, 2004). Bass and Avolio's (1993) conceptual model implied that a congruous relationship existed when an organization exhibited either a transformational leadership style with a transformational type of organizational culture or a transactional

leadership style with a transactional type of organizational culture. An incongruity between leadership styles and types of organizational cultures negatively effects staff satisfaction and organizational effectiveness (Shein, 1995).

Rationale for researching acute care hospitals

This research studied acute care hospitals to explore the relationship between leadership styles and types of organizational cultures. Published healthcare practitioner literature reflects the impact of organizational stress, due to external influences, on the development of new leadership styles (Nyp & Whetsell, 2004; Sansone, 2005). These influences included the need to improve patient safety (Gundersen, 2004; McFadden, Towell & Stock, 2004), improve quality of care improvement efforts (Croteau, 2003; Edlin, 2003), improve corporate compliance, establish new patient confidentiality programs (Larson, 2002b; Narine & Persaud, 2003), create patient-centered care (Coile, 2002), and diversify development activities (Spaeth, 2004). Other external influences on acute care hospitals included reduced federal funding and inequitable community competition for referrals (Healthcare Financial Management Association, 2005; Kendricks, 2005). Acute care hospitals must address these issues in light of reduced resources (Harper, 2002).

Organizational stress due to external influences effects internal operations and can cause the creation of new leadership styles (House, et al., 1991; Gerth, Wright & Mills, 1986; Campbell, Brommer & Yao, 1993; Rajnandini, 1995; Janssen, 2004). Leadership styles can effect types of organizational cultures (Campbell, 2004). Therefore, if leadership styles change due to external forces then, as implied by the conceptual model of Bass and Avolio (1993), types of organizational cultures are

effected one way or another. The organization requires efficient and effective leadership to minimize the impact of the organizational stress, making this an industry that can benefit from identifying an optimal relationship between leadership styles and types of organizational cultures (Gade, 2004; Goeff & Waldersee, Simmons, 2000; Bass & Avolio, 1993). In addition, acute care hospitals are of the same industry type making them conducive to this research. A review of the areas of influence and impact on the acute care hospital industry follows.

Factors influencing acute care

Healthcare spending is exceeding the nation's economic growth and accounts for almost 19 percent of the gross domestic product by 2014 (Fong & Loos, 2005; Finkelstein, 2005a). According to the Center for Medicare and Medicaid Services acute care hospital spending increased 6.7 percent from 2003 to 2004 (Fong & Loos, 2005). Due to the rapid growth in unexpected healthcare spending anticipated under the new Medicare drug benefit, there may be a shift in federal money allocation away from acute care hospitals (Fong & Loos, 2005). Medicare Payment Advisory Commission (2003) reports overall financial margins for acute care hospitals are falling since 1997 and are negative for 59 percent of the acute care hospitals. For 2003, the last date when the data is available, the average Medicare margin for acute care hospitals is negative 1.9 percent (American Hospital Association (AHA, 2004b). Overall, Medicare recipients receive 40 percent of the care provided by acute care hospitals (AHA, 2004b).

New Medicare cuts are included in the President's 2006 budget proposal, which effects payment rates for hospitals and patient access (Kendrick, 2005; Davidson, 2005; Fong, 2005). The President's 2006 budget proposal also calls for a reduction of 60

billion dollars from the Medicaid program over the next 10 years, further challenging the already strapped acute care hospital industry (American Hospital Association [AHA], 2005c). Medicaid is now an accepted vehicle to fill gaps in the current health insurance marketplace, especially for the vulnerable population and for those who cannot afford private insurance (Thomas, 2005; American Hospital Association [AHA], 2003). This underpayment, coupled with new proposed federal funding reductions, could prove devastating to the industry. These changes have an impact on acute care hospital providers as is next explained.

Some providers are considering eliminating or reducing services because of federal payment cuts and shortfalls (Finkelstein, 2003). One example of this is Hudson Valley Hospital in New York. Due to the Medicaid shortfall, this hospital is already reducing the number of outreach satellites (AHA, 2003). The underlying reason for the cuts, in this case the Medicaid shortfall, has an indirect impact on access to Medicare and private insurance patients. Hudson Valley Hospital is typical of hospitals reactions to declining federal funding. Thirty percent of physicians are also refusing to accept new Medicaid patients (AHA, 2003; Finkelstein, 2003). These patients may then have no choice but too seek services in a community based acute care hospital emergency room, increasing the hospital's shortfall and financial vulnerability. Other challenges loom on the horizon, as explained below.

Limited-service providers have been a growing phenomenon in today's healthcare environment. These providers have been specializing in managing specific conditions or services, such as heart, orthopedics, surgical and, diagnostic services (AHA, 2004c). Physicians, who own these services, have referred to facilities in which

they have had a financial interest, potentially creating a conflict between the medical needs of the patient and the financial interests of the physician (AHA, 2004c). The impact on the community and on the hospital's ability to provide care has been a great concern for the acute care hospital.

One report noted that limited-service providers in one community had positive operating margins of 44 percent by selecting, better paying insurances, while the average margin for the same community acute care hospitals was only 3.3 percent (AHA, 2004c). One nationally recognized hospital in South Dakota experienced the effect a local physician's practice that opened its own ambulatory surgery facility. The physician practice steered patients away from the acute care hospital. The hospital began to have financial difficulties because of the patient shift, which lead to the elimination of services (AHA, 2004c). This acute care hospital however, through a strategic planning assessment, differentiated and repositioned itself in the marketplace. A creative leadership style and innovative type of organizational culture enabled this hospital to respond to the challenge, grow, and increase its competitive position in the market (AHA, 2004c).

While other healthcare sectors faced similar pressures, the acute care hospital industry has been unique in its opportunity to adapt to these changes. As an example, National Committee for Quality Health Care (National Committee for Quality Health Care [NCQHC], 2005) noted the adaptability of Northwestern Memorial Hospital's leadership style when faced with external regulatory forces that ultimately resulted in improved hospital outcomes. The acute care hospital industry, unlike other health sectors could integrate diverse health care product lines within their continuum and

maximize market share (American Hospital Association [AHA], 2005d). Hospitals have successfully integrated ambulatory care services (AHA, 2005d), as well as other post - acute and divergent acute care services under one organizational umbrella (NCQHC, 2005).

The adoption of alternative and progressive leadership styles can enable this sector of the health care industry to grow, diversify, and meet the externally imposed challenges (American Hospital Association [AHA], 2005e; NCQHC, 2005). This research concentrates, as is further explored below, on the acute care hospital environment because of its level of organizational stress and adaptability within the marketplace. The following section describes the primary research questions for this study.

Research question

There is extensive literature on leadership styles and types of organizational cultures. Bass and Avolio (1993), and others (Balhazard & Cooke, 2004), suggest that leadership style is related to the type of organizational culture. In implying a relationship between leadership and culture, Bass and Avolio (1993), provide operational definitions and opposing scales for further research. The use of the aforementioned opposing transactional and transformational leadership styles and types of organizational cultures provides a basis for identifying potential correlations. There is insufficient research to understand if a correlation exists in acute care hospitals. Hence, there is a need to examine the relationship between leadership styles and types of organizational cultures in acute care hospitals. The important research questions, then, are:

RQ1) What impact does leadership styles and/or types of organizational cultures have on organizational outcomes?

RQ2) What impact does congruence and/or lack of congruence between leadership styles and types of organizational cultures have on organizational outcomes?

Acute care hospital leaders facing organizational stress and externally imposed challenges need to create dynamic and adaptable organizations to ensure positive organizational outcomes. Acute care hospital leaders often discuss the need to find effective leadership styles as well as types of organizational culture that are responsive to their directives and optimize organizational outcomes (Fischer, 2000). Little evidence about the relationship between these variables existed in the healthcare practitioner literature (Pennington, Townsend & Cummins, 2003). This study proposed to assess the relationship between certain acute care hospital's leadership styles and types of organizational culture.

Importance and extension of this research

This study extends the work of Bass and Avolio (1993) in empirically identifying and quantifying a relationship between leadership styles and types of organizational cultures. Prior practitioner research, as noted earlier, was limited. A brief review of the limitations of the studies follows.

Medley (1995) found a correlation between transformational and transactional leadership to employee satisfaction however, included contingent rewards as a transformational leadership factor. Lawrence's (2000) research was limited to a survey of senior leaders at two hospitals and did not examine the impact of leadership and cultural types on outcomes. McDaniel (1992) and Howard (2004) correlated

transformational leadership and employee satisfaction but did not explore the impact of transactional leadership. Peters' (1997) study supported the work of McDaniel and Howard however, the study was limited to a review of retail employees. Peters did find a correlation between transformational leadership and organizational effectiveness. Dunham and Klafeln's (1990) study was limited to a review of the prevalence of transformational leadership styles in a healthcare setting. McGuire (2003) only examined perceived leadership styles between staff nurses and their nurse managers. Eppard (2004) used different cultural constructs and studied municipal employees. Gabbert's (2005) study was limited to a review of the prevalence of transformational and transactional leadership among hospital chief executive officers.

There is little known about the relationship between healthcare leadership and organizational culture (Pennington, et al., 2003) and even less within the acute care hospital environment. The findings of this research may assist acute care hospital leaders in understanding the influence that the relationship between leadership styles and types of organizational cultures can have on their organization's outcomes (Bennis, 1999; Schein, 1996; Senge, 1990; Kazemek, 1990). This will be a new body of knowledge in healthcare leadership.

Practical application associated with this research

Anecdotal observations have suggested that there is a need to have congruency between leadership styles and types of organizational cultures with an acute care hospital (Goonan & Stoltz, 2004; Bennis, 1999; Schein, 1996). As an example, Valentino and Brunelle (2004) documented the merger of a number of healthcare facilities in Ontario, Canada. The authors postulated that ensuring a congruent

leadership style and type of organizational culture would result in improved organizational effectiveness, improved communication, staff satisfaction, and including lower staff turnover within the new organization (Valentino & Brunelle, 2004). The authors further argued that inattention by leadership to organizational culture would have the reverse effect on the outcome of the merger and the effectiveness of the newly formed organization. Merkens and Spencer (1998) recounted similar findings while documenting the effect of organizational outcomes within Tillsonburg District Memorial Hospital during the installment of a new leadership team with a new leadership style. The authors concluded that alignment of their new leadership style to their organization's culture was critical to the success of the organization.

This research may assist acute care hospital leaders by supporting or refuting a relationship between leadership style to type of organizational culture in order to optimize organizational outcomes such as effectiveness and employee satisfaction. Given the current financing and externally imposed challenges facing the acute care hospital industry, mechanisms that support the achievement of positive outcomes are also important for organizational growth and adaptability (AHA, 2005e).

Organization of the remainder of the study

Chapter two of this study presents a review of relevant literature on leadership, organizational culture, and the conceptual model for the relationship between leadership style and the type of organizational culture. This chapter also presents the hypotheses as related to the study. The conceptual model depicted on pages 13 to 14 for this research; is a preview of chapter 2, the literature review. Chapter three presents the methodology and details the research design, measures, variables, research

procedures, and analytical procedures utilized. Chapter four applies the obtained data to the specified analytical and statistical tests. This chapter also develops conclusions as to the hypotheses. Chapter five includes the discussion, reviews the implications of the study and recommendations for future research.

CHAPTER 2: LITERATURE REVIEW AND CONCEPTUAL THEORETICAL MODEL

Introduction

As previously stated, the purpose of this research is to examine the impact of leadership styles and types of organizational culture on organizational effectiveness and employee satisfaction in acute care hospitals. The conceptual model described in the introduction (see Figure 1) relates a full spectrum of leadership styles and types of organizational cultures, which lead to, improved organizational outcomes including organizational effectiveness and employee satisfaction. The conceptual model separates leadership styles and types of organizational cultures followed by the assessment of the impact of the effect of the relationship between the two on organizational outcomes, as noted above. This literature review follows the flow of the conceptual model. Five main sections make up this chapter. The first section is a review of literature on leadership styles and includes a review specific to healthcare and hospital leadership styles. The second section provides a review of the types of organizational cultures and relevant literature on healthcare organizational culture. The third is a review of the relationship between types of organizational culture and leadership style. This chapter also provides a review of the supporting literature for the use of the conceptual model, outlined in Figure 1 and concludes with a review and discussion of the study's hypotheses.

Leadership

Definitions of leadership

There is little agreement across academic disciplines with regard to how to define leadership (Bennis, 1999; Burns, 1978; Magliocca & Christakis, 2001; Prewitt, 2003;

Yousef, 1998). The literature on leadership includes a broad review of the principle categories of leadership including trait or behavioral and situational leadership styles. The remainder of the leadership section deals with a review of transformational and transactional leadership styles.

The first broad category of leadership includes individual leadership behaviors or traits that are self-defining and may result in an active response by an employee (Bass, 1997; Bennis, 1999; Cope & Wadell, 2001; Prewitt, 2003; Kazemek, 1990; Prewitt, 2003; Sene, 1990; Stodgill, 1974). The second category, situational and contingency theories includes leadership actions that affect an organization and its policies and procedures (Bass, 1960; Bass, 1985, Bass & Avolio, 1994; Bennis, 1999; 1997; Burns, 1978; Bossink, 2004; Hersey & Blanchard, 1979; Kendi, Nordtvedt & Perez, 2002; Maglioccan & Christankis, 2001, Prewitt, 2003; Rajnandini, 1995; Shackelton, 2001; Yammarino & Bass, 1990; Yousef, 1998; Yousef, 1998a). Leadership styles are aggregated leadership traits, behaviors, situations and actions (Adeyemi-Bello, 2001; Yukl, 2002). A literature review of leadership styles follows.

Descriptions of leadership styles and theories

The literature in sociology, psychology, and organizational behavior classifies leadership according to various styles (Kendia et al., 2002). Leadership styles represent an aggregate of behaviors, traits, situations, and actions. Such styles are considered important in that they relate to several variables, including individualism, attitudes towards risk, managers' values, and communication skills (Yousef, 1998b), organizational commitment and job satisfaction (Yousef, 1998a), extent of influence and power, and achievement of goals (Kendia et al., 2002). Leadership style is also a critical

aspect of a leader's role, which in turn influences organizational performance (Kazemek, 1990; Yousef, 1998a). Leadership styles as documented in the literature range from situational influences and individual leader employee transactions to those influences that create sustainable organizational change (Bass1960; Burns, 1978; Kedi, Nordtvedt & Perez, 2002; Schwartz et al., 2002). The leadership theories listed in Table 1 represents the primary style theories.

Table 1
The Primary Theories of Leadership

Leadership Theories	Definition
Trait theory	Trait theory has been associated with leaders who are distinguished as having intrinsic superior traits of a leader (Bennis, 1984; Politis, 2001) and with the great man theory of leadership (Burke, 1982). Trait leadership studies have also examined acquired characteristics including motivation, personality, and individual character as well as how employees relate to such characteristics (Bass, 1997; Bass & Avolio, 1994; Carpenter, 2002; Cope & Waddell, 2001; Kazemek, 1990; Northhouse, 1997; Prentice, 2004; Shackleton, 20001; Sene, 1990).
Human resources theory	This theory classifies certain leaders by the manner in which they treat their employees, either as individuals or as impersonal resources. This theory also addresses employees' personal or hygiene needs, such as workplace accommodations (Rubin, Fry, & Plovnick, 1978).
Style theory	Style theory accounts for and focuses on the tasks as well as the degree of decision-making control a leader maintains. This theory has three distinct leadership approaches: autocratic, democratic, and laissez-faire (Kazemek, 1990; Rubin et al., 1978; Vroom, 1973). This leadership theory suggests that a leader may also adopt one specific leadership approach in response to the needs of an employee (Blake & McCanse, 1991).

Table 1 *(Continued).*

Style theory *(Continued)*	1. Autocratic is defined when the leader works through established controls and sets work methodologies and assignments. This leader also sets limits to discussion and democratic decision-making (Kazemek, 1990). 2. Democratic utilizes employee participation. The democratic leader outlines goals and expectations, and allows a group to dictate methods and make decisions (Kazemek, 1990). 3. Laissez-faire as defined by Kazemek (1990) is non-leadership or a non-directive leadership approach. This approach of leadership offers limited participation, discussion, and decision-making on the part of the leader. A leader who exhibits a Laissez-faire approach remains inactive while the employee and middle manager independently perform their job duties (Dubinsky et al., 1995; Kazemek, 1990).
Behavioral theory	This theory of leadership causes employees to assume task-oriented behaviors (Politis, 2001; Sheridan & Vredenburgh, 1978).
Contingency theory	This theory accounts for the personal characteristics of a leader and covers certain situational factors or tasks that require the leader to alter his or her leadership behaviors (Burke, 1982; Vroom & Yetton, 1973). Contingency theory has distinct sub styles, ranging from leader-member relations and task-structure to a description of the leader's position of power (Burke, 1982).
Situational leadership theory	This theory categorizes tasks and behaviors in response to various organizational and work-related situations (Burke, 1982; Bass, 1985). Individual leadership personality, behaviors, or traits do not influence this leadership approach but organizational situations do (Burke, 1982; Bass, 1997; Nebeker & Michell, 1974; Politis, 2001). Situational leadership is also referred to as transactional whereby the leader motivates the employee by providing rewards (Bass, 1985), and by the leaders ability to plan, organize, provide direction and exercise control over the employee (Kanungo, 2001). Situational leadership differs from contingency theory in that it does not address the position of power. Situational theory places greater emphasis on relations depending upon the specific situations or circumstances in which leaders find themselves (Burke, 1982; Burns, 1978; Maglioccan & Christankis, 2001). Bass (1981) also defined a varied set of style theories based upon organization or

Table 1 *(Continued).*

Situational leadership theory *(Continued)*	position and classified these styles as, for example, political, educational, student, legislative, organizational, and psychometric.
Transactional and transformational leadership or New leadership theory	Another set of leadership theories originally defined by Burns (1978) and further refined by Bass (1985) known as transactional and transformational, are further explored in this chapter. Burns (1978) originally classified political leadership as either transactional or transformational, based on the interactions between a leader and an employee. The leader's level of interaction and activity with respect to his or her relationship with the employee distinguishes transactional and transformational leadership (Howell & Avolio, 1993).

Although the definitions of leadership style theories are quite diverse, they tend to aggregate related behaviors, traits, and situations. We turn next to a detailed discussion of transactional and transformational theories, which provide the conceptual foundation for this research. Bass and Avolio's (1994) conceptual model provides a basis for examining congruous leadership styles and types of organizational cultures. The transactional and transformational theoretical concept of leadership styles provides an effective framework in understanding the effectiveness of the relationship between the leader and the employee as well as its accepted use in the healthcare setting. Many scholars of leadership research (Bycio, Allen, & Hackett, 1995; Kirby, Paradise, & King, 1992; Sosik, Potosky, Jung, 2002; Carroll & Edmondson, 2002; McDaniel & Wolf, 1992; Schwartz et al., 2002) also accept these leadership styles. The transactional and transformation model of leadership provides for the congruous description of the relationship between leadership styles and types of organizational cultures (Bryman, 1992).

Transactional and transformational leadership styles.

Research on leadership during the 1970s and 1980s has led to new theories, as espoused by Burns's (1978) seminal work on leadership (Howell & Avolio, 1993; Magliocca & Christakis, 2001). Burns classified political leadership as either transactional or transformational. He based this classification on the interactions between followers and their leaders. His classification addressed issues of power, collective purpose, and change (Burns, 1978). He also created a moral framework for the follower-leader interaction (Burns, 1978; Magliocca & Christakis, 2001). Researchers then began studying transactional and transformational leadership with respect to its relationship to the business environment (Bass, 1985; Bycio, Hackett, & Allen, 1995) and service-based industries (Chatman, & Jehn, 1994). The differentiation of transformational and transactional leadership styles in a business or service-based industry is the leader's interaction and activity with his or her employees (Howell & Avolio, 1993).

Prior to Bass's (1985) and Burns' (1978) work on transformational leadership, most literature on leadership style centered around transactional leadership, contingent rewards, or reinforcement (Bass, Avolio, Jung, & Berson, 2003), to a point where the terms had become interchangeable. The term used to describe the process of setting job expectations and providing employee rewards for goal achievement is c*ontingent reward* (Bass, 1985; Bass et al., 2003). These leaders use contractual agreements to exchange one thing for another (Bass, 1985). The use of rewards motivates and influences employee behavior, thereby ensuring that employees perform their intended job duties (Avolio, Waldman, D.A., & Einstein, 1988; Bass, 1985; Howell & Avolio, 1993;

Politis, 2001). Through distribution of rewards, the transactional leader meets the needs of the employee, assuming the employee makes an effort to complete his or her assigned job tasks (Bass, 1985; Bass, 1997; Bass & Avolio, 1993; Bass & Avolio, 1994). The employee tends to agree with and accept direction from the leader in exchange for rewards, which may include praise, job enrichment, and recognition, or the avoidance of disciplinary action (Bass et al., 2003). Employees are less concerned with organizational goals than with their individual needs (Bass, 1985). Bass and Avolio (1994) noted that contingent reward leadership is effective because the leader sets clear goals and rewards employees upon goal achievement. The transactional style appears to be the style most frequently used in industry (Dubinsky et al., 1995).

The transformational leader, at the other extreme, stimulates, arouses, and inspires the employee to do more than originally expected (Bass, 1997; Bass & Avolio, 1994; Hater & Bass, 1988; House, Spangler, & Woycke, 1991). Transformational leadership has been associated with the terms *charismatic*, *visionary*, and *new leadership* (Den Hartog, Muijen, & Koopman, 1997). The transformational leader creates a shared vision and purpose and drives an employee to go beyond the exchange for rewards (Den Hartog et al., 1997), and to make sacrifices to pursue the organization's mission (House et al., 1991). This leader takes a long-range perspective on the needs of employees while they strive to meet the expectations of their leader (Bass, 1985; Bass & Avolio, 1984; Burns, 1978; Bycio et al.; Dubinsky et al., 1995). Leaders who adopt the transformational style are able to get their employees to transcend their own needs (Schwartz et al., 2002). Those employees of a transformational leader tend to be more satisfied with their leaders and their jobs (Bass,

1999), and demonstrate higher performance (Hater & Bass, 1988; Howell & Avolio, 1993). Magliocca and Christakis (2001) noted that transformational leadership enables and motivates real change, as opposed to a simplistic fix-it mentality characteristic of transactional leadership. Change, as defined by Magliocca and Christakis (2001), enables the employee and leader to identify core operations issues and plan for overall process and system improvements. Organizations bound by tradition and long-standing rules tend to seek a status quo with regard to seeking ongoing improvement in processes (Bass & Avolio, 1997). However, organizations that seek continual renewal, cultural shifts, and innovation and that are open to risk-taking are generally receptive to transformational leadership styles (Bass, 1985; Howell & Avolio, 1993).

Transformational and transactional leadership styles, at opposite ends of the leadership scale, demonstrate separate leadership dimensions (Burns, 1978; Bycio et al., 1995; Judge & Piccolo, 2004; Waldman, Bass, & Yammarino, 1990). Transformational leadership style builds on transactional leadership factors (Avolio, Bass, & Jung, 1999; Bass & Avolio, 1993; Judge & Piccolo, 2004; Waldman et al., 1990). The transactional style forms the base the transformational leader uses to motivate an employee to exert greater effort and higher levels of performance (Avolio et al., 1988; Bass, 1985; House et al., 1991; Howell & Avolio, 1993; Judge & Piccolo, 2004). Bass (1985) argued that transactional leadership builds dependability and trust between the leader and employee, thereby creating the possibility for the development and use of this style. But whereas the transformational leader exhibits characteristics of transactional leaders, the reverse is not true (Bycio et al., 1995; Den Hartog et al., 1997; Howell & Avolio, 1993; Judge & Piccolo, 2004). Judge and Piccolo (2004) postulated

that without transactional leadership as a base, transformational leadership is not achievable. That traces of transactional styles exist in transformational leaders but not vice versa is an important consideration in this study. This may be especially true in areas involving development of employee trust and dependability.

Higher and lower order transformational and transactional leadership factors

Bass (1985) and Avolio, Waldman, and Einstein (1988) classified leadership into higher order and lower order style factors, respectively known as transformational and transactional leadership styles. Bass (1985) developed seven style factors for defining transformational and transactional leadership: charisma, inspiration, intellectual stimulation, individualized consideration, contingent reward, management-by-exception, and one non-leadership classification termed laissez-faire (Bass et al., 2003).These original seven style factors of leadership evolved into eight, expanding management-by-exception into active and passive (Howell & Avolio, 1993; Judge & Piccolo, 2004). The characteristics of transformational leadership style factors correlate with the 4 "I's" (Bass & Avolio, 1994); these are idealized or charismatic, inspirational motivation, intellectual stimulation, and individual considerations (Avolio, et al., 1999; Bass & Avolio, 1994; Bycio et al., 1995; Hater & Bass, 1988). The four higher order style factors could be treated as a single factor or as transformational leadership (Bass & Avolio, 1997; Bycio et al., 1995).

Transactional leadership style factors correlate with contingent reward and active management-by-exception (Avolio, et al., 1999; Bycio et al., 1995; Hater & Bass, 1988). Similar to the classification of style factors into a single leadership style, Bass (1990) viewed contingent rewards and management-by-exception as a single style factor or as

transactional leadership. Passive-avoidant leadership relates to a laissez-faire leadership style (Avolio et al., 1999).

Factors of transformational leadership

Following is a review of the individual style factors involved in transformational and transaction leadership. The four higher order transformational leadership style factors, as noted above, include idealized or charismatic, inspirational motivation, intellectual stimulation, and individual considerations (Bass, 1985; Bass, 1998; Bass & Avolio, 1994; Bass et al., 2003). Although the four transformational style factors represent different dimensions of leadership, they share a similar basis in creating a shared vision and purpose that enables an employee to go beyond exchange for rewards.

Bass and Avolio (1994) defined the idealized or charismatic style factor as employees' respect, trust, and admiration for their leader. Idealized style factor, as described by Bass and Avolio, examines the nature of an employee's reaction to the leader and his or her behaviors. The employee identifies with the leader (Bass, 1985) and copies the behaviors of the leader (Bass & Avolio, 1994; Dubinsky et al., 1995), and the leader earns the respect of employees by considering their needs over his or her own (Avolio et al., 1999). The leader also instills pride in the employee (Bass & Avolio, 1994). The idealized leader communicates a vision, mission, and demonstrates consistent values and ethics that the employees embrace (Bass & Avolio, 1994; Bass et al., 2003; House et al., 1991). Judge and Piccolo (2004) assumed that employee rewards are intrinsic. This leader is most appropriate for enabling shifts in organizational culture and leading an organization in crisis (Bass, 1985, 1998), and instilling major

change (Waldman et al., 1990). Bass (1985) noted that idealized leaders are most prevalent in innovative, flexible organizations where teamwork and a devoted workforce are necessary.

Inspirational leadership is the ability to communicate the expectations and purpose of the organization, which the employee embraces (Bass 1985; Bass & Avolio, 1994). These leaders demonstrate self-determination, commitment, and optimism in reaching organizational goals (Bass & Avolio, 1994). Inspirational leaders motivate their employees to achieve organizational goals and elevate their expectations (Bass, 1984; Bass & Avolio, 1994; Dubinsky et al., 1995). The inspiration behind this leadership is primarily an emotional response from the employee (Bass, 1984). Bass (1985) indicated that this leader is able to invoke an emotional response from the employee through job competence. A positive emotional response becomes the motivation for the employee.

Intellectual stimulation occurs when the leader finds new ways of motivating employees to solve problems independently and achieve organizational goals. This leader motivates employees through developing challenging tasks and projects (Bass, 1985; Bass & Avolio, 1994). He or she uses critical problem-solving reasoning rather than unsupported intuition and assumptions (Bass, 1985; Hater & Bass, 1988). This leader also supports employees' innovation, independence, and questioning of old ways of thinking and of their own values, beliefs and goals, as well as those of the leader (Bass & Avolio, 1994; Bass et al., 2003; Dubinsky et al., 1995). The leader also supports employees when they independently address organizational challenges (Bass & Avolio, 1994). The skills of the intellectual leader are particularly important when the organization faces non-structured problems, requiring a high level of problem solving

and analysis (Bass, 1985). This leader is less willing, due to his or her interest in transforming the organization, to accept the status quo (Bass, 1985). Bass (1985) suggested that such a leader, as with the other transformation groups, seeks new organizational processes despite possible risks. He further noted that this leader is proactive rather than reactive, more creative, innovative, and radical in his or her actions, and searches for resolution to organizational problems.

Individualized consideration is defined by the extent to which the leader cares about the needs and concerns of the employee (Bass, 1985; Bass & Avolio, 1994). This leadership style considers each employee's developmental needs (Bass, 1985; Bass & Avolio, 1994; Bass et al., 2003; Dubinsky et al., 1995). Such a leader also practices delegation that is consistent with his or her judgment of an employee's capabilities (Bass, 1985). Individualized consideration is most effective when the leader deals one-on-one with the employee and promotes a two-way dialogue (Bass, 1985; Bass & Avolio, 1994; Hater & Bass, 1988). This leader develops a strong exchange with the employee that enhances the employee's self-image, personal fulfillment, and learning capability (Bass, 1985). The employee's sense of ownership of his or her decisions motivates employees to seek more information (Bass, 1985; Hater & Bass, 1988).

Factors of transactional leadership

Transactional leadership, in contrast to transformational leadership, concentrates on the communication of job rewards following the successful completion of a job task by an employee (Avolio & Bass, 1999; Bass, 1985; Burns, 1978; Bycio et al., 1995; Dubinsky et al., 1995). Both contingent reward and active and passive management-by-exception correlate with transactional leadership (Avolio, Bass, & Jung, 1999; Bass,

1985). This leadership style consists of three style factors: contingent rewards, management-by-exception, and laissez-faire.

Contingent rewards are found when the leader communicates both what is expected from employee and what they will receive if they meet the leaders expectations of tasks and goals (Bass, 1997; Dubinsky et al., 1995; Howell & Avolio, 1993; Judge & Piccolo, 2004; Kedia et al., 2002). Contingent rewards are associated with positive job commitment and satisfaction on the part of the employee (Bycio et al., 1995) and improved organizational citizenship behaviors (Bass et al., 2003). Contingent rewards leadership has also been determined effective in promoting employee performance (Bycio et al., 1995; Judge & Piccolo, 2004; Waldman et al., 1990).

Management-by-exception or contingent reprimand style focuses on monitoring for mistakes as well as the level and point of the leader's intervention (Dubinsky et al., 1995; Howell & Avolio, 1993). Management-by-exception is either active or passive, based upon the level of the leader's monitoring and timing of his or her intervention (Hater & Bass, 1988; Howell & Avolio, 1993; Judge & Piccolo, 2004). If the leader takes a passive position, then he or she waits for mistakes and deviations to occur before taking corrective action (Bass, 1997; Bass et al., 2003; Dubinsky et al., 1995). Active management, on the other hand, involves ongoing monitoring for variances and deviations and taking active corrective action (Bass, 1985; Bass et al., 2003; Howell & Avolio, 1993; Kedia et al., 2002). Such a leader defines expectations as well as inadequate performance, and rewards or punishes the employee based upon the observed variant level of performance or outcome (Bass et al., 2003). Active management-by-exception is an effective form of leadership (Avolio et al., 1988). Howell

and Avolio (1993) noted that passive management-by-exception is negatively associated with the employee's satisfaction and performance. Evidence suggests that a leader who uses passive management-by-exception receives lower levels of employee performance than when taking active corrective actions (Howell & Avolio, 1993).

Another form of leadership, laissez-faire, is really a form of non-leadership, as documented in the literature (Bass, 1985; Bass, 1988; Bass et al., 2003; Judge & Piccolo, 2004). Laissez-faire is an ineffective form of leadership (Den Hartog et al., 1997). Although it has some relationship to passive management-by-exception, as it is a form of non-leadership, it is not associated with either transactional or transformational leadership (Avolio et al., 1999; Judge & Piccolo, 2004). Laissez-faire leaders tend to act, if at all, only after problems have become serious, at which time they may take corrective action (Avolio, Bass, & Jung, 1999; Bass, 1997; Dubinsky et al., 1995). Laissez-faire is dissatisfying for the employee because of the leader's lack of trust, interaction, and involvement (Avolio et al., 1999).

Differences between transformational and transactional leadership styles

The above review highlights some differences between transactional and transformational leadership; however, it is also important to draw distinct differences to demonstrate their underlying importance to organizational performance, structure, and dynamic. The transformational leader is more proactive than the more reactive transactional leader (Bass, 1985). The transformational leader is more creative, innovative, and radical in his or her attempt to transform an organization and when searching for new solutions to organizational problems (Bass, 1985). I-Harn (2001) noted that the success or failure of an organization depends on the transformational

leader by virtue of his or her ability to motivate and inspire employees. The transformational leader is also more empowering and less controlling than the transactional leader (Kanungo, 2001).

Transformational leaders tend to be more interested in social values and to emerge during times of organizational crisis (Bass, 1985, Bass et al., 2003). They also tend to derive legitimacy from their employees and exert a moral and ethical influence over them (Kanungo, 2001; Magliocca & Christakis, 2001). They tend to be more adaptive in dealing with their organization and more engaged in developing cohesion and commitment (Bass, 1998; Bass et al., 2003). As noted previously, transformational leaders are more effective in establishing higher expectations for their employees and creating more willingness by their employees to face greater organizational challenges (Avolio et al., 1999; Bass et al., 2003). Bass (1985) found a relationship between the charismatic leader and performance, as well as between the leader's effectiveness and employee satisfaction. Transformational leadership also results in organizational effectiveness (Avolio & Bass, 1998; Bass, 1985; Parry, 2000).

In contrast, Bass (1985) noted that transactional leaders are more focused on keeping the organization functioning. These leaders react to problems identified by operational deviations or mistakes, and they are more attentive to operating within the constraints of the organization. The intensity of leadership may be equivalent between transactional and transformation leaders, but the former are more attentive to employees' needs, feelings, and performance feedback (Bass, 1985). Clearly, there are sharp differences between the leadership styles, making it necessary to identify those factors that may influence the use of one leadership style over another.

Factors that influence choice of leadership styles

A number of variables determine the type of leadership style used. Yousef (1988b) noted that the geographic, culture and socio-economic backgrounds of leaders play an important role. The level of technology within the business unit may also have an impact, since it may affect the degree to which the leader can engage in a participatory form of decision-making, and the use of a particular leadership style (Kazemek, 1990; Yousef, 1998b; Yukl, 1981). Other determinants may be organizational culture (Schein, 1985), ownership of the organization, educational level (Yousef, 1998b), level of authority, organizational function, type of industry, size of the business unit, amount of interdependence within the leadership hierarchy, and the extent of organizational crisis within the business (Campbell, Bommer, & Yeo, 1993; Gerth, Wright, & Mills, 1986; Rajnandini, 1995; Sheridan & Vredenburgh, 1978). Other factors found to influence the choice of leadership style include the stages of an organization's life cycle, the competencies of the leader and employees (Yukl, 1981), and a leader's personal attributes (Campbell et al., 1993; Yukl, 1994). Additional determinants include job characteristics (Campbell et al., 1993; Sheridan & Vredenburgh, 1978) and organizational situations (Campbell et al., 1993).

As noted above, the role and prevalence of organizational crisis influences leadership style choices (Rajnandini, 1995). Rajnandini (1995) argued that the level of organizational crisis within an organization tends to provide leaders with the opportunity to transform the organization and take purposeful action. The employee views such a leader as charismatic (Rajnandini, 1995). The ability to transform and implement change in the organization at times of crisis requires high-level relationship-building

skills (Eagleson, Waldesee, & Simmons, 2000). Organizations seeking stability may not want a charismatic, idealized leader (Conger & Kanungo, 1987).

Determinants of leadership styles also include the behaviors of the leader as well as the extent of the employees' involvement in decision-making processes (Campbell et al., 1993). Campbell et al. (1993) argued that the determination of leadership style also depends upon the leader's perception of the appropriateness of a particular style. They further elaborated by noting that employees' expectations of a leader's behavior also determines leadership style.

Each organization adopts the aggregate traits of each leadership style. As such, an organization in crisis may embrace a transformational leader, while an organization seeking stability or the status quo may adopt a transactional leadership style. Other factors, such as organizational life cycles, size, and ownership, are not well researched or defined in terms of influencing transformational versus transactional leadership styles.

A number of variables may affect the choice of one leadership style over another. While transformational and transactional leadership styles exist at opposite ends of the leadership spectrum, the two are independent (Bass, 1985). Transactional leaders motivated their employees to complete assigned tasks by the use of rewards for services provided (Bass, 1985; Bass, 1997; Bass & Avolio, 1994). The transformational leader on the other extreme stimulated, aroused, inspired the employee to exceed the expectations of their leader (Bass, 1985; Bass, 1997; Bass & Avolio, 1994; Dubinsky, et al, 1995). Transformational and transactional leadership styles on opposite ends of the leadership scale demonstrated separate leadership dimensions (Burns, 1978). The use

of these two leadership factors, transformational and transaction as two independent aggregate styles are acceptable and verifiably definable in the literature (Bass, 1997; Bass & Avolio, 1993; Parry & Proctor-Thomson, 2003; Hinkin & Tracey, 1999; Hatter & Bass, 1988).

As outlined in the introduction, in today's healthcare environment, acute care hospitals are facing an increasingly competitive and regulated environment and must create dynamic and adaptable organizations to ensure success. These challenges are placing acute care hospitals under stress and are requiring these organization's leaders to align themselves with new initiatives including adjustments to both leadership styles (Dubinsky, Yammarino, Jolson & Spanagler, 1995) and types of organizational cultures (Classen, 2000; Kazemek, 1990 a; Kuchinke, 1999; Lauer, 2004; Larson, 2002b). This review will next examine the healthcare industry and acute care hospital literature for studies pertaining to leadership.

Healthcare leadership literature

There have been a number of studies on leadership within the healthcare industry (Scott-Cawiezell, et al., 2004) however, limited leadership studies within acute care hospitals and nothing that combines both leadership and culture in the acute care segment of the healthcare industry. With some exceptions, most healthcare literature on leadership has not represented empirical research but has been observational and anecdotal in nature. Leadership has been examined in healthcare in terms of psychological empowerment (Morrison, Jones, Fuller, Bridger & Brown, 1997), the management and capture of intellectual capital, the motivation of employees (Gade, 2004), and the impact of innovation and adaptability of healthcare services on an

organization's ability to meet its changing needs (Carroll & Edmondson, 2002; Larson, 2001a; Schwartz et al., 2002).

Schwartz et al. (2002) found that due to the rapid changes in the industry healthcare leaders need to be adaptable. Because healthcare organizations have been experiencing increased stress, these leaders should be innovative and creative, as well as empathetic and caring (Johnson, 1998; Medley & Larochelle, 1995; Schwartz et al., 2002). Healthcare leaders should also excel at creating trust and building a moral bond and strong interpersonal relationships with their employees and community (Bycio et al., 1995; Larson, 2001a). While these researchers have not specifically categorized transformational or transactional leadership styles, the emphasis on building a moral bond, being innovative, and creating a shared mission lead one to associate these traits with a transformational leadership style.

Effective healthcare leaders exhibit transformational leadership skills, increased employee productivity, commitment, and satisfaction (Bycio et al., 1995; Dubinsky, Yammarino, Jolson, & Spanagler, 1995; Dunham & Klafehn, 1990; McDaniel & Wolf, 1992; Medley & Larochelle, 1995). The transformation draws their employees to identify with the vision of the organization's leaders. The healthcare leader who exhibits transformational leadership skills communicates organizational goals that in turn promote employee job retention (Dunham & Klafen, 1990; McCloskey & McCain, 1987). Morrison et al. (1997) found that transformational leadership styles in healthcare settings positively affected job satisfaction and motivation through the employees' perception of their level of decision-making and autonomy. This was in contrast to employees in a transactional environment, which had no impact on their motivation but

positively effected satisfaction (Medley & LaRochelle, 1995). Medley and LaRochell (1995), however, classified contingent reward as a transformational style instead of a transactional leadership style.

Schwartz et al. (2002) noted that most healthcare organizations have transactional leaders (Carroll, 2001; Carroll & Edmondson, 2002; Schwartz et al., 2002). These leaders are mainly interested in service delivery and ensuring the status quo (Scott-Cawiezell et al., 2004) rather than in capturing market-share, and motivating their employees (Dunham & Klafen, 1990; Schwartz et al., 2002; Senge, 1990). Bycio et al. (1995) found that healthcare workers are more likely to leave their positions and have less organizational commitment when working with transactional leaders.

Leadership skills that transform and create healthcare organizations into thriving energized entities and that are innovative and adaptive exhibit transformational leadership styles (Bycio et al., 1995; Carroll & Edmondson, 2002; McDaniel & Wolf, 1992; Schwartz et al., 2002). Schwartz et al. (2002) defined an innovative and adaptive organization as one that demonstrates flexibility and commitment to its employees, uses teams effectively, has strong performance competencies, and drives organizations toward service diversity. Healthcare organizations that do not have transformational leaders are at a competitive disadvantage in the marketplace (Schwartz et al., 2002).Transactional leadership is adequate when healthcare reimbursement is stable and there is little to affect market share, but this is no longer the case, as Schwartz et al. have argued. The aforementioned review indicates that transformational leadership styles support a creative and innovative environment. This is an important consideration for healthcare leaders wanting to create an organization responsive to organizational

crises, challenges, and innovative needs. The following section examines studies pertaining to leadership within the acute care hospital literature.

Acute care hospital leadership literature

Within sub sections of the healthcare sector, Jones (1995) found that patients and employees in acute care hospital based nursing units were more satisfied with a transformational leader than with a transactional leader. Morrison et al., (1997) also found that in acute care hospitals transformational leadership positively affected employee job satisfaction and motivation. Morrison postulated that job satisfaction and motivation were a result of perceived job autonomy and their involvement in decision-making.

The following section reviews the literature on organizational culture. This section, as in the review of leadership styles, concentrates on the transformational and transactional types of organizational cultures, which provides the basis of the conceptual model, outlined in Chapter 1. This section begins with a general discussion of the types of organizational cultures and then narrows the review to the healthcare environment.

Organizational Culture

Overview

The research on organizational culture is diverse and expansive (Campbell, 2004). Organizational culture is a set of assumptions, beliefs, and values (Kowalczyk & Pawlish, 2002; O'Reilly et al., 1991; Putz, 1991; Yousef, 1998b). Culture is also a shared understanding of feelings and experiences by its organization's members (Canessa & Riolo, 2003). Values and beliefs, which are the building blocks of an

organization's culture, consist of symbols, communications scripts, events, myths, and ways of doing things (Chattopadhay, 1991). Culture is also the glue that keeps an organization together (Bass, 1981); it has also been considered an organizational social construct (Hofstede et al., 1990). O'Reilly (1989) classified culture as control measures and normative orders that include accepted attitudes, behaviors, risk-taking, rewards for change, receptiveness, mutually accepted goals, autonomy, and the shared belief that organizational action is required.

Organizational culture is an organizational not an individual term (Hofstede, Neuijen, Ohayv, & Sanders, 1990). Group experiences in established organizations develop into organizational cultures (Camessa & Riolo, 2003; Cooke & Rousseau, 1988; Strasser, Smits, Falconer, Herrin, & Bowen, 2002). Organizations also tend to have similar cultures in relatively homogenous business units and organizational types, with similar sizes, levels of technology, and configurations (O'Reilly et al, 1991; Webster, 2004). It has thus been determined that an organization's culture have been influenced by both internal and external factors (Webster, 2004).

Culture has been historically molded (Hofstede et al., 1990) and deeply ingrained in an organization and as a result is difficult to change (Atchison, 2002; Drucker, 1995; Hofstede et al., 1990; Narine & Persaud, 2003; Taylor, 2003). If a leader desires to alter an organization's culture, he or she needs to understand the skills necessary to influence culture. Studies have found that leadership and communication effectiveness are both necessary to create a culture or influence its changes (Canessa & Riolo, 2003; Narine & Persaud, 2003; Shaw, 2002). The leader must address the underlying issues of culture in order to shape the development of operational practices and personnel

behaviors (Putz, 1991). The culture of an organization and its vision and purpose must be in alignment for it to change (Wallach, 1983).

Culture influences the communication skills and decision-making processes of the organization's members and affects its credibility (Cooke & Rousseau, 1988; Fisher, 2000; Kowalczyk & Pawlish, 2002; Mycek, 2000). Organizational culture also shapes the organization's level of socialization and learning (Cooke & Rousseau, 1988). Kowalczyk & Pawlish (2002) correlated the importance of culture to an organization's competitive advantage, adaptability, and level of innovation. It has been further noted that the culture of an organization may affect organizational system operations, productivity, leadership actions (Shaw, 2002; Taylor, 2002), performance (Cameron & Quinn, 1999), and organizational effectiveness (Parry, 2000; Valentino, 2004). Research has shown that culture has influenced employees' commitment (Lok & Crawford, 1999; Mycek, 2000; O'Reilly, 1989; Parry, 2000; Putz, 1991; Webster, 2004) and behaviors (Atchison, 2002; Cooke & Rousseau, 1988). As with the definitions of leadership, definitions of culture are very diverse.

Types of organizational cultures

Numerous versions and descriptions of organizational culture exist in the literature. Types of organizational cultures represented in some cases below are aggregated organizational behaviors and traits. Leaders and employees support organizational behaviors and traits created over time. The factors that define types of organizations culture are consistent and effective when aligned with the organization's needs and preferences (O'Reilly et al., 1991; Wallach, 1983). Culture, as measured by O'Reilly et al. (1991), consists of eight factor structures. They defined the factors as

innovation, attention to detail, outcomes, aggressiveness, and supportiveness, emphasis on rewards, team orientation, and decisiveness. Chatman & Jehn (1994) deviated slightly from the definition of these factors by including innovation, stability, respect for people, orientation to outcomes, and attention to detail, team orientation, and aggressiveness. Other descriptions of culture defined by Testa, Meuller, and Thomas (2003) include independent dimensions such as internal versus external focus, and structural control versus flexibility. Fisher (2000) defined three dimensions of culture: (a) comfort, which he defined as being paternalistic toward its members; (b) complacency, in which employees are dependent on the organization for their total well-being; and (c) contribution, where employees are committed to excellence, chaos, and accepted change. Cameron in turn (1998) defined five dimensions of culture: (a) clan, which includes a concern for people and sensitivity to consumers; (b) hierarchy; (c) market-supported stability and control; (d) adhocracy, defined as flexibility; and (e) individualism. Wallach (1983) noted three primary organizational cultures: (a) bureaucratic, which are hierarchical and compartmentalized; (b) innovative, which are exciting and dynamic; and (c) supportive, which are warm and humanistic. Hofstede et al. (1990) in turn defined six opposing factors to describe organizational cultural differences: (a) process versus results oriented, (b) employee versus job oriented, (c) parochial versus professional, (d) open versus closed systems, (e) loose versus tight controls, and (f) normative versus pragmatic. In addition, Harrison (1972) defined four cultural types: power, role, people, and tasks.

Both Cooke and Rousseau (1988) and O'Reilly (1991) defined organizational culture in terms of direction and intensity (Cooke & Rousseau, 1988; O'Reilly, 1991). In

their description of culture, Cooke and Rousseau (1988) defined direction by an organization's values, behavioral norms, and modes of thinking. They then defined intensity by (a) the strength of the organization's consensus among its employees as to what goals the organization emphasized, and (b) the strength of rewards and expectations for behaviors. Based upon their research and an expansion of the concepts of direction and intensity, Cooke and Rousseau subsequently defined 12 different cultures, from humanistic-helpful to self-actualizing.

In contrast to O'Reilly et al. (1991), Bass and Avolio (1993) defined two levels of organizational culture: transformational and transactional. In defining these cultural styles, they noted that transactional cultures focus on behaviors and norms that implicitly define contractual relationships. Within the transactional culture, work responsibilities are a condition of employment. They defined transformational cultures as environments where there is a general sense of purpose, family, and commitment. In this type of organizational culture, leaders and employees both share interests and a mission. Saxby, Parker, Nitse, & Disman (2002) and Atchison (2002) offered similar constructs while using different terminology from Bass and Avolio for classifying cultures. Their definitions of cultural styles include organic versus mechanistic and corporate soul versus rewards, which appear to mirror the same constructs of transactional and transformational respectively. Kanter (1983) also used similar terminology when classifying culture. Kanter wrote about innovation, team building and participation, the promotion of change and transformation, faith in the leader's direction, and effective crisis management to ensure the development of an effective organizational culture. Cooke and Rousseau's (1988) research also noted two

contrasting styles at opposite ends of the spectrum. They defined one end as an organization committed to innovation, adaptability to change, teamwork, and personal development, while having a strong sense of vision. The other extreme emphasizes the status quo, task-oriented behaviors, supervision with limited rewards for innovation, and punishment for assuming risk-taking behaviors. These cultural extremes match the transformational and transactional definitions of Bass and Avolio (1993) respectively, which they note are at opposite ends of the spectrum. Other researchers have also referenced the transactional and transformational culture constructs, as reviewed below.

Schein (1985) defined three levels of organizational culture: artifacts as level one, values, and beliefs as level two, and basic organizational assumptions as level three. Schein (1996) later redefined the classifications as (a) an operator culture, which is an internal culture based upon its operational success; (b) an engineering culture, based upon its designers who manage core technologies; and (c), executive culture, based upon the belief and actions of the organization's executive management team. Schein (1996) defined the engineering and executive cultures as predominantly transactional in nature, relying on rewards, control, and monitors. He noted that operational cultures often have an innovative component with transformational characteristics. Schein (1996) further noted that transformational properties are difficult to sustain if not supported by the executive leadership and its related culture.

Characteristics of transactional organizational culture

A transactional type of organizational culture focuses on explicit and implicit contractual relationships (Bass & Avolio, 1993). Task assignments and role expectations relate to contingent rewards and discipline (Bass & Avolio, 1993).

Organizational stories, assumptions, values, and rewards maintain the transactional type of organizational culture. This type of culture is dependent upon setting a reward for everything. An employee has a price that motivates him or her to work towards defined goals (Bass & Avolio, 1993). Within this type of organizational culture, work commitment is short-lived (Putz, 1991). In addition, employee self-interests are promoted (Putz, 1991) while team interactions are not (Bass & Avolio, 1993). Employees working in a transactional type of organizational culture experience greater independence (Bass & Avolio, 1993). Employees tend not to recognize the organization's vision, mission, innovation, and creativity (Bass & Avolio, 1993). This type of organizational culture also tends not to accept risk-taking behaviors (Bass & Avolio, 1993), while it does emphasize productivity (Putz, 1991). Management-by-exception and contingent rewards are leadership tools used in this culture (Bass & Avolio, 1993).

Characteristics of transformational type of organizational culture.

The transformational type of culture has been defined as having properties similar to the earlier defined transformational leader's "4-Is" (Avolio, Waldman, & Yammarino, 1991; Bass & Avolio, 1993; Hater & Bass, 1988). This culture provides its employees with a general sense of purpose and commitment to the values and goals of the organization (Bass & Avolio, 1993; O'Reilly et al., 1991; Parry, 2000; Schwartz et al., 2002). Bass and Avolio (1993) noted that transformational culture builds on and augments a transactional culture in an organization. As long as employees work toward a central defined purpose and vision of the organization, the transformational type of culture does not ignore employees' individual needs, goals, and rewards (Bass &

Avolio, 1993; O'Reilly et al., 1991). Transformational culture lies at the intersection between an organization's mission, processes, people, and technology. Within this organizational type, the organization and its resources are in harmony and coordinated (Sengupta, 2004). Bass and Avolio (1993) noted that transformational leaders and employees go beyond self-interest and rewards, and work toward a common goal for the organization.

Two additional types of organizational cultures

Bass and Avolio (1993) also defined two other organizational subcultures. The first is a pedestrian culture, which has minimal transactional qualities and almost no transformation properties. The more that pedestrian qualities emerge, the less the organization negotiates and the fewer the employees who buy into the organization's vision. In this culture, the status quo prevails and the organization accomplishes little. Bass and Avolio also defined the "garbage can" culture and related this type of organizational culture to laissez-faire leadership. In this culture, everyone independently decides to create policies and tasks that meet their individual needs. The organization has little purpose, and few activities are accomplished. There is very little internal cooperation, as well as little purpose, vision, or values, with no regulations to control matters (Bass & Avolio, 1993).

Differences between transactional and transformational organizational cultures

Leaders in transformational cultures tend to act as role models and mentors (Parry, 2000). Organizations with high transformational properties have leaders who espouse their organization's vision, purpose, and goals for their employees to embrace (Bass & Avolio, 1993; Parry, 2000). Bass & Avolio (1993) also state that rewards do not

create employee trust, motivation, and productivity. In organizations with a strong transformational culture, the tendency is to have a flatter, more decentralized structure that is more flexible, creative, and dynamic, with an emphasis on innovation to realize the potential for growth (Bass & Avolio, 1993; Narine & Persaud, 2003). Organizations with this type of culture are more successful and adaptable, and they address organizational challenges in an effective manner (Bass, 1985; Gade, 2004; Narine & Persuad, 2003; Parry, 2000).

Parry (2000) noted that transactional cultures concentrate on explicit contractual interactions, while there is limited organizational vision buy-in and little commitment to the organization beyond the reward provided. The transactional organization tends to be more interested in self-interests and short-term goals; there is greater emphasis on controls, directions, and standardizing operating procedures. The organization's structure is stable, routine, and centralized, with a clear top-down command as well as control procedures (Bass & Avolio, 1993). The more transactional the culture, the more everything requires negotiation. Successful cultures need a transactional base that enables the development of a transformational culture (Bass & Avolio, 1993).

Factors that influence the choice of organizational culture

Numerous factors influence an organization's cultural characteristics. These include both internal and external factors (Comack, Brady, & Porter-O'Grady, 1997). These influences drive the need to change, as well as to adopt and support creative processes. Comack et al. (1997) believed that those influences could affect both interactions between leaders and employees, as well as the organization's identity and purpose. The employee accepts the type of culture only when the leader is able to

communicate effectively an organizational vision and to demonstrate trust (Bennis, 1999; Comack et al., 1997). Bennis (1999) noted that the leader's decision-making style influences the type of organizational culture. Transformational decision-making directed toward organizational goals and vision stands in contrast to transactional decision-making that meets individual needs.

The leader's values and leadership style shape an organizational culture through the influence of daily practices, tasks, and behaviors (Hofstede et al., 1990; Sengupta, 2004). O'Reilly et al. (1991) argued that individual leadership motivations might also influence culture styles. A leader with a preference for aggressiveness and outcomes may be stimulated to develop an innovative form of culture.

Other factors influencing the type of organizational culture include correlations between organizational cultural styles and type of industry tasks (Chatman & Jehn, 1994; O'Reilly, 1989) technology and growth rates (Chatman & Jehn, 1994; O'Reilly, 1989), and nationality, number of employees, business size, organizational structure (hierarchy), and control systems (Hofstede et al., 1990). Different organizational constraints bound public and private service-based organizations, which in turn drive different cultures (Parry, 2000). Hofstede et al. (1990) identified values and behaviors shared by specific occupations that may influence culture. They also implied that service-based industries should cater more to people than to outcomes, thereby influencing the adoption of one style over another. O'Reilly (1989) implied that high growth industries foster the creation of an innovative culture. Chatman and Jehn (1994) noted that opportunities for growth might promote innovation and a flexible culture. They also suggested that those who require repetitive and predictable outcomes might

require strong orientation to detail, reliability, and stability, along with strong control influences. These studies have also tended to demonstrate the influence of various organizational demographics on the type of culture embraced by an organization.

Healthcare culture

Healthcare literature is scant with empirical research and information on the industry's assessment and documentation of its organizational culture (Brunell, 2004). Healthcare organizations, as noted by Shaw (2002), develop strong cultures due in part to the emotional needs of patients and staff, as well as a commitment to the organization and its traditions. In healthcare settings, Shaw observed that staff develops strong bonds and loyalty to their organizations and their traditions. In organizations with healthcare professionals, the likelihood of a cultural disconnect is high, as a professional may be striving for innovation while resisting bureaucratic controls, supervision, and standards (Pettigrew, Ferlie & McKee, 1992; Shaw, 2002).

Hall (1998) noted that transformational leadership creates a new cultural paradigm in the healthcare setting. A shift to a transformational type of organizational culture would support innovation (Carroll & Edmondson, 2002; Coile & Russell, 2001; Narine & Persaud, 2003), risk-taking, learning, and the sharing of knowledge (Narine & Persaud, 2003). The development of a transformational type of culture in the healthcare sector would also support efforts to concentrate on patient care needs and create a patient-centered structure (Flanagan, 1997; Taylor, 2003). The shift would furthermore enable an organization to move away from a transactional type of culture that concentrates on profits and earnings (Comack et al., 1997; Schwartz et al., 2002) and depends upon contingent rewards. However, this cultural shift would not be possible

without leaders committed to implementing and supporting new behaviors and patient quality initiatives, and promoting policies and procedures that support the organization's vision (Carrol & Edmondson, 2002; Narine & Persuad, 2003).

Relationship Between Leadership Style and Organizational Culture

The central function of leadership is to create and manage organizational culture by imposing the leader's values, behaviors, beliefs, and organizational purpose on the organization's employees (I-Harn, 2001; Schein, 1992, 1985; Senge, 1990; Shaw, 2002). The values created and behaviors accepted become the driving forces behind the development and maintenance of organizational culture, which in turn influences employees (Bass & Avolio, 1993, 1994; Burns, 1978; House et al., 1991; Webb & Weick, 1979). Leadership style depends on a number of factors, including the type of organizational culture and communication styles (Gade, 2004), the industry's demographics and attributes, and preferences of the organization's decision-makers (Yousef, 1998b). As a result, the leader needs to be attentive to existing types of organizational cultures and, as necessary, promote changes in values and employee behavior (Bass & Avolio, 1993).

House et al. (1991) indicated that a leader influences employees' values, beliefs, and behaviors to become consistent with his or her own, thereby establishing a type of culture. The type of organizational culture enables the leader to create a shared meaning and cohesiveness with employees (Conger & Kanungo, 1987). Cultural norms exist and change because of leaders' actions and expectations with respect to how they react to problems or conflict as well as how they behave (Bass & Avolio, 1993). A leader's role changes with regard to influencing culture based upon a number of intrinsic

and extrinsic factors, such as the need of the organization to be innovative, transformational or stable, and transactional. Thus, the role of the leader in establishing culture is an important dynamic.

Organizational culture and leadership are interrelated and inseparable (Shein, 1992). Leadership style may affect the type of organizational culture as much as the type of culture may affect leadership style (Bass & Avolio, 1993; Kerr & Slocum, 1987; Schein, 1985). Leadership shapes culture by affecting behaviors, values, and beliefs. Organizational culture shapes behaviors that influence the power of the leader. Hence, the process of influencing culture and leadership works in both directions.

To ensure that organizations are viable and successful, they must be dynamic and adaptable. Innovation, risk-taking, and the ability to accept organizational change are required to obtain organizational success (O'Reilly, 1989). A leadership style that copies and supports its culture is important, if not essential, for future organizational success (Hofstede et al., 1990). Some organizations are able to alter leadership styles to match their cultures (Carroll & Edmondson, 2002; Koene et al., 2002). Those organizations that find cohesiveness between leadership styles and types of culture are adaptable (Bass, 1985). Organizations that do not have an effective relationship between their leadership style and type of culture are neither adaptable nor effective (Schein, 1996). Schein (1996) further noted that most organizations have numerous types of organizational cultures, most of which are not effectively related. Schein (1996) noted that the lack of effective relationship would lead to organizational failures on a number of levels. Schein's study does not address, however, all of the intervening

variables that might limit corporate success and failure, independent of the type of culture and leadership style.

Leaders interested in organizational renewal have to foster an organizational culture consistent with the transformational type (Bass & Avolio, 1993). Both the transformational leader and organizational culture type support creativity, innovation, experimentation, risk-taking, and sensitivity to the needs of employees by developing a shared sense of purpose, belief, and vision (Bass, 1998; Bass & Avolio, 1993). Innovative organizations should move to a transformational type of culture while maintaining a transactional cultural base through developing trust and increased ability to resolve complex problems (Bass & Avolio, 1993). These leaders foster an organization willing to accept change and growth rather than one seeking the status quo. McDaniel & Wolf (1992) noted that leadership qualities, particularly transformational, are the key to the development of a culture that supports performance effectiveness. A positive correlation exists between transformational leaders, organizational outcomes, and performance measures, while the correlation with transactional leadership is less strong (Bass & Avolio, 1989; Hater & Bass, 1988).

Bass (1985) suggested that transformational leadership is associated with organizations where the structure is flexible and the employees are educated and trusted. Transformational leaders tend also to work in non-bureaucratic organizational cultures. These leaders are also suited to organizations in crisis or affected by dynamic organizational demands (Yukl & Michael, 1993). Leaders tend to succeed in a transformational type of organizational culture when the employees are committed and independently provide extra effort to meet organizational goals (Bass & Avolio, 1993).

Transactional leadership has been extensively studied (Bass, 1985; House, 1971; House, Filley, & Gujarati, 1971). These studies have noted the importance of underlying situational factors that influence the impact of the leader's behavior. They also stress the underlying reward dynamic between the leader and employee. The transactional leader favors and supports a stable, maintained, and structured type of organizational culture (Bass, 1985; Yukl & Michael, 1993) that offers both leader and employee organizational rules and expectations while being more bureaucratic (Bass & Avolio, 1993).

A transformational or transactional leadership style and a transformational or transactional organizational culture respectively support the underlying characteristics of the other. The literature has correlated organizational types of culture with leadership styles (Bass, 1985). However, these documented correlation studies either have been based upon a review of literature or have had limited outcomes that are not generalizable (Kasper, 2002; Kuchinke, 1999). Case studies have also related leadership styles to organizational healthcare cultures (Shaw, 2002; Stamm, 2003), but the studies have been limited to observations and have failed to use an experimental design. Pennington, Townsend, and Cummins (2003) noted that organizational variables are important to understanding the relationship between leadership and organizational cultures. Leadership studies have generally not taken into account organizational or industry variables (Hunt & Dodge, 2000).

Other studies have described the relationship between leadership styles and types of organizational cultures. Organizational type, such as corporate versus manufacturing influences the effectiveness of different leadership styles and types of

organizational cultures as shown by Pennington et al. (2003). Pennington et al. also found correlations between various cultures and leadership styles. Specifically, they found a correlation between leaders who exhibit innovation, risk-taking, and experimentation with a clan type of organizational culture. Clan culture demonstrates flexibility and concern for people and develops an organizational shared vision (Pennington et al., 2003). Clan culture and the transformational organizational culture may be related. Pennington et al. also found a negative association between innovation, risk-taking, and experimentation and a market culture. They described market culture as exhibiting stability and control. Hence, market culture and the transactional organizational culture may be related. Den Hartog, Muien, and Koopman (1997) also noted a relationship between transformational leadership and an innovative supportive culture. They further found that transactional leadership is positively associated with a culture that emphasizes rules and is goal-oriented. However, this study examined a heterogeneous industry pool and used different cultural dimensions than those proposed in this study.

Empirical studies on the correlation between culture and leadership in healthcare settings are not readily available. Of those that are, some have indicated a positive correlation between culture, leadership styles, and job satisfaction; however, the methodology has been limited to a survey of healthcare professional line staff (Lok & Crawford, 1999). Carrol and Edmondson (2002) suggested that strong leadership drives healthcare organizational cultures. Johnson (1998) and Schwartz et al. (2002) extended this argument by suggesting that healthcare leadership should mirror a transformational leadership style. Coile and Russell (2001) suggested that healthcare culture should be

innovative if organizational success is the intended outcome. These researchers have supported the argument that innovation in the healthcare setting is required if a dynamic and adaptable organization is desired. Acute care facilities, which are the focus of this study, are an example of an organization that desires to be dynamic and adaptable.

Conceptual Framework

Bass and Avolio's (1993) work has provided the conceptual framework for this study. Bass's (1985) earlier work influenced Bass and Avolio's research on transformational and transactional leadership styles and types of organizational culture. The transformational leadership style and organizational culture translates individual self-rewarding actions and behaviors of the employee into actions and behaviors that support and promote the organization's mission and vision (Bass & Avolio, 1993). A visual conceptual leadership model by McGuire (2003) examined the effect of transformational leadership on an organization and its employees' behaviors. This model and related study, however, are limited in that they investigated only the effect of transformational leadership on organizational commitment. The model, however, did provide an initial basis for this study in that it set up a side-by-side comparison between the variables of transformational leadership style and organizational commitment.

Howard's (2004) conceptual model, as McGuire has, uses a side-by-side comparison between leadership style and type of organizational culture. This model inserted intervening variables such as institutional size, employee perceptions of the organization's leadership style and type of culture, and type of organizational culture. The model separately examined the influence of the intervening variables on leadership and culture. This study, however, also only looked at transformational leadership and its

impact on culture. It also used a different set of types of organizational cultures. The Howard study looked at constructive and defensive types of cultures originally defined by Cooke and Lafferty (1994). Cooke and Lafferty's (1994) original study was performed in an educational setting. Cooke and Lafferty's observations concluded a relationship between transformational and constructive, and transactional and defensive cultural types in an educational setting. Their study offered no empirical evidence to support their conclusions.

Eppard (2004) developed another leadership cultural model that expanded on Howard's (2004) study by comparing both transformational and transactional leadership with defensive and constructive types of organizational culture. This study did not examine influences or the effect of the relationship on the organization. The model did provide a side-by-side comparison of the primary variables, leadership styles, and organizational types of culture. It also established a feedback loop between the leadership style and type of culture. The model supported the argument that leadership style and type of organizational culture may influence each other. This research also found a correlation between transformational leadership and the constructive cultural type, and between transactional leadership and defensive cultural type (Eppard, 2004). This study was limited to municipal employees and did not examine the impact of the relationship on the organization, such as on effectiveness or employee satisfaction.

Other conceptual models have documented the relationship between leadership style and type of organizational culture (Bass, 1985; Hofstede et al., 1990; Schein, 1992). Bass, Hofstede et al., and Schein's models are not easily transferable because of their lack of empirical research. However, they do provide a basis for the study of the

correlation between various leadership styles and other variables, including employee satisfaction and organizational types of cultures.

Bass and Avolio's (1993) conceptual model defined the relationship between leadership style and type of organizational culture on organizational outcomes. Hogan and Kaiser (2005) also defined the impact on organizational outcomes. They identified five primary outcomes that included employee commitment, effective leadership, business planning, and organizational culture. Bass and Shackelton (1979) further defined the impact on organizational effectiveness, which they related to the employees commitment to the organization and employee satisfaction. Other researchers also postulated that impact on organizational outcomes in the form of employee organizational commitment, satisfaction, motivation, shared beliefs and heightened individual performance (Conger and Kanungo, 1987; Hartog et al., 1996; Testa, Mueller & Thomas, 2003). Bennis & Nanus (1985) found a slightly more restrictive relationship between leadership and outcomes, whereby they defined outcomes in terms of organizational commitment and the development of employee trust. Research literature has identified a relationship between types of organizational cultural and organizational effectiveness, expressed as employee organizational commitment (Test, Mueller & Thomas, 2003). Similarly, leadership and organizational culture influence employee satisfaction as perceived by the employee of their job and work experiences (Hofstede, 1980). Bass and Avolio (1995) refined their conceptual model by identifying organizational outcomes as reflected by how the employee perceives their ability to meet job requirements, organizational goals, and team cohesiveness. Bass and Avolio (1997) also defined organizational outcomes as employee satisfaction. They measured

satisfaction in terms of how satisfied the employee was with the leader's operational methods and willingness, by the leader, to develop a strong relationship that is satisfying to the employee.

Bass and Avolio's (1993) model postulated that specific leadership styles are compatible with specific types of organizational cultures, creating an effective organization. Other researchers related that matching leadership styles and types of organizational culture might result in operational renewal and creativity (Bass & Avolio, 1993), and effectiveness (Balhazard & Cooke, 2004; Cameron & Quinn, 1999). Bass and Avolio established both a transformational and transactional leadership style and a corresponding type of organizational cultural model. More specifically, the model (Figure 1) examines the relationship between transformational and transactional leadership styles and types of organizational culture on organizational effectiveness and employee satisfaction. The model also builds on those developed by Eppard (2004), Howard (2004), and McGuire (2003).

Summary and Hypotheses

This review of earlier work indicates that a relationship between leadership styles and types of organizational cultures should exist to create an effective organization (Bass, 1985; Bass & Avolio, 1993; Jaskyte, 2003; Shaw, 2002; Yousef, 1998a; Yousef, 1998b). Leadership affects organization outcomes, and a particular leadership style influences the creation of a type of organizational culture (Harris & Ogbonna, 2001). However, researchers have not established a primary driver for a particular style or culture. The literature does support the notion that one leadership style, with related operational needs, appears to support the development of a related type of culture.

Regardless of the underlying reasons for their development, relating organizational cultures to leadership styles may result in operational renewal and creativity (Bass & Avolio, 1993), and effectiveness (Balhazard & Cooke, 2004; Cameron & Quinn, 1999).

A natural extension of this discussion is that a transformational leader and a transformational culture are most clearly associated with organizational growth and success. From this discussion, it appears that individual leadership styles and types of organizational culture should be both related and congruous (Bass, 1985). Numerous internal and external influences may dictate the type of culture and leadership styles. Despite these intervening variables, this study explores the relationship between culture and leadership style. Although it is beyond the scope of this study to link all variables of an organization's type of culture and leadership styles to organizational effectiveness and employee satisfaction, a review of correlatives between organizational cultures and leadership styles follows.

The research questions, developed in Chapter 1, addressed the need to understand if leadership styles and/or types of organizational cultural types effects organizational outcomes. The second addressed the need to examine impact of the relationship of congruent or lack of congruence between leadership styles and types of organizational cultures in acute care hospitals on organizational outcomes. The literature indicates that acute care hospital leaders facing organizational stress and externally imposed challenges need to create dynamic and adaptable organizations to ensure positive organizational outcomes (Dubinsky, et al., 1995; Classen, 2000; Kazemek, 1990 a; Kuchinke, 1999; Lauer, 2004; Larson, 2002b). Little evidence about the relationship between these variables exists (Scott-Cawiezell, et al., 2004). This

study proposes to assess the relationship between acute care hospital's leadership styles and types of organizational culture.

Three major issues identified from the review of the literature and the research question enabled the development of hypotheses for further study. The first issue to be established is whether a congruent relationship between leadership style and type of organizational cultural types are evident in an acute care hospital setting. The second issue is the extent to which leadership styles and/or types of organizational cultural factors effect an organization's effectiveness and employee satisfaction in a hospital setting. Third is the issue of whether congruent or the lack of congruence between the type of culture and leadership style effect an organization's effectiveness and employee satisfaction. This section summarizes these issues and the supportive literature for the following hypotheses.

Hypotheses

A review of the literature has indicated a preference for transformational leadership in organizations seeking renewal, operational success, and innovation (Bass, 1985; Bass, 1998; Bass & Avolio, 1993; I-Harn, 2001). The literature has also demonstrated this type of leadership style to be compatible and consistent with a transformational culture (Bass & Avolio, 1993). It has furthermore supported the proposition that organizations in crisis tend to favor a transformational leadership style (Rajnandini, 1995; Waldesee & Simmons, 2000). Numerous internal and external factors influence an organization's culture including leadership style, type of industry, organizational structures, adaptability, level of innovation, and control systems (Bennis, 1999; Chatman & Jehn, 1994; Comack et al., 1997; O'Reilly, 1989). Acute care

hospitals are themselves organizations in crisis thanks to a number of external influences, including reduced federal funding and reduced access to patients and resources.

H1. Transformational leadership style will result in transformational type of organizational culture.

The available literature pointed out that those organizations seeking stability and maintenance favor a transactional leadership style (Bass, 1985; Conger & Kanungo, 1987). The literature also supported the fact that most healthcare organizations have a transactional leadership style. This style should be congruous with a transactional type of organizational culture (Bass, 1985; Bass & Avolio, 1993; Schwartz, 2002), although no study of a relationship between the two in an acute care hospital exists in the literature. While healthcare settings have clearly been in crisis, a situation that favors a transformational style, the need to create stability, bureaucracy, rules, and regulations may in fact have necessitated the development of a strong transactional presence (Conger & Kanungo, 1987; Johnson, 1998).

H2. Transactional leadership style will result in transactional types of organizational culture.

The Transformational leader tend to be more interested in social values and are more effective during times of organizational crisis (Bass, 1985, Bass et al., 2003). These leaders are more effective in establishing higher expectations from their employees and promoted greater effectiveness and employee satisfaction (Avolio & Bass, 1998; Bass, 1985; Parry, 2000). The healthcare leader who demonstrates transformational skills increased employee productivity and satisfaction (Bycio et al.,

1995; Dubinsky et al., 1995; Morrison et al., 1997). Employees of the transformational leader identify with the organization's mission and demonstrate greater job commitment (Dunham & Klafen, 1990; McCloskey & McCain, 1987). Acute care hospital facing increasingly competitive and regulated environments must have innovative and dynamic leaders Dubinsky, et al., 1995).

H3. Transformational leadership style will result in high organizational outcomes (employee satisfaction and organizational effectiveness).

Within a transformational organizational culture, the employees tend to buy-in to the organization's mission and they demonstrate a commitment to the organization (Bass & Avolio, 1993). The bureaucracy within this type of culture is less structured and more flexible. This culture also emphasizes innovation to optimize growth (Bass & Avolio, 1993; Narine & Persaud, 2003). These organizations are successful, adaptable, and effective (Bass, 1985; Gade, 2004; Narine & Pesaud, 2003). Parry and Proctor-Thomas (2003) suggest that transformation types of culture, which emphasizes innovation and flexibility, demonstrates positive organizational outcomes. Employees within healthcare settings that have transformational cultures develop strong bonds and loyalty to the organization (Pettigrew et al., 1992).

H4. Transformational type of organizational culture will result in high organizational outcomes (employee satisfaction and organizational effectiveness).

The transactional leader tend to focus on keeping the organization stable and are more attentive to operating within defined constraints (Bass, 1985). This leader has been negatively associated with employee satisfaction and organizational performance

(Howell & Avolio, 1993). This leader focuses on mistakes, defines expectations and inadequate performance (Bass et al., 2003). Healthcare employees working for transactional leaders tend to be less motivated (Medley & LaRouchelle, 1995) and less job commitment (Bycio et al., 1995). Schwartz et al. (2002) found that most healthcare leaders have transactional skills. The transactional healthcare leader tends also to encourage the status quo rather than capturing more market-share (Dunham & Klafen, 1990).

H5. Transactional leadership style will result in low organizational outcomes (employee satisfaction and organizational effectiveness).

Organizations with high levels of transactional type of organizational culture tend to focus on contractual relationships (Bass & Avolio, 1993). Within this type of organizational culture, employee work commitment is short-lived, and self-interests promoted (Bass & Avolio, 1993; Putz, 1991). In addition, team interactions are not encouraged (Bass & Avolio, 1993). Employees tend not to recognize the organization's mission (Bass & Avolio, 1993). This cultural type demonstrates a multi-level bureaucratic organizational structure (Bass & Avolio, 1993). Employees working in healthcare transactional organization may resist bureaucratic controls, seek innovation and as a result may have low job commitment (Pettigrew et al., 1992; Schwartz et al., 2002; Shaw, 2002) and organizational outcomes (Parry & Proctor-Thomas, 2000)

H6. Transactional type of organizational culture will result in low organizational outcomes (employee satisfaction and organizational effectiveness).

Rajnandini (1995) noted that charismatic leadership, or transformational leadership style, leads to increased organizational effectiveness. The author reasoned that transformational leadership style results in employee acceptance of the organization's mission, vision, and purpose, leading to greater employee effectiveness in terms of improved productivity, communication, and workflow (Rajnandini, 1995). Wang and Takao (1994) further found a positive correlation between certain leadership styles, organizational efficiency, and employee satisfaction. Although these researchers used other categories of leadership, the correlations indicate that active leadership leads to organizational efficiency and employee satisfaction.

Hogan and Kaiser (2005) proposed a conceptual model to further support the contention that leadership style, through the management of employees and organizational functioning, optimizes organizational effectiveness. These researchers identified five components leading to organizational effectiveness: (a) employees committed to the organization's mission and purpose, (b) intrinsically motivated employees, (c) effective leadership, (d) effective business planning, and (e) organizational culture. Leadership failure or inaction, they argued, leads to organizational inefficiency. An early work by Bass and Shackelton (1979) found a similar relationship between leadership style, organizational effectiveness, and employee satisfaction. Bass and Shackelton found that leadership that allowed employee acceptance of organizational mission and purpose as well as autonomy enriched both organizational effectiveness and employee satisfaction. Bass (1985, 1997), Parry (2000), Avolio and Bass (1998), and Pounder (2001) observed similar

findings. Trott and Windsor (1999) recounted anecdotal evidence where leadership style resulted in employee satisfaction in a hospital nursing unit.

Parry (2000) and Valentino (2004) both found a relationship between the type of organizational culture and organizational effectiveness. McDaniel and Wolf (1992) noted that leadership qualities, particularly in the transformational type of organizational culture, are the key to performance effectiveness. Other researchers found similar relationships between type of organizational culture on one hand and organizational effectiveness and employee satisfaction on the other (Bass, 1999; Bass & Avolio, 1993; Cameron & Quinn, 1999; Lok & Crawford, 1999; Shaw, 2002; Schein, 1995; Wallach, 1983).

A review of the literature found that incongruent organizational cultures negatively influenced the outcomes of organizational mergers (Featherly, 2005; Kazemek, 1989; LeBrun, 2005: McCord, 2000, Schonfeld, 1997). Other researchers suggested that incongruent leadership styles and types of organizational cultures lead to reduced organizational communications, satisfaction among employees (Chew & Sharman; 2005; Jones, 2000; LeBrun, 2005) and organizational effectiveness (Green, 1988; Heifetz, 1988; Lewis, French & Steane, 1997; Schein, 1996). Schein (1996) further noted that the lack of an effective relationship would lead to organizational failures on a number of levels. Kazemek (1989) found that leadership and cultural incongruity negatively influenced mergers in healthcare settings. Schein (1995) further found that incongruity between leadership styles and types of organizational culture results in reduced staff satisfaction and organizational effectiveness.

The importance of a congruent relationship between leadership style and organizational culture in healthcare organizations was described by McAlearney, Fisher, Heiser and Robbins (2005). The fact that some organizations may be dysfunctional and demonstrate lack of congruency in the acute care hospital environment is important to identify.

H7. A congruous relationship between leadership style and type of organizational culture will result in high organizational outcomes (employee satisfaction and organizational effectiveness).

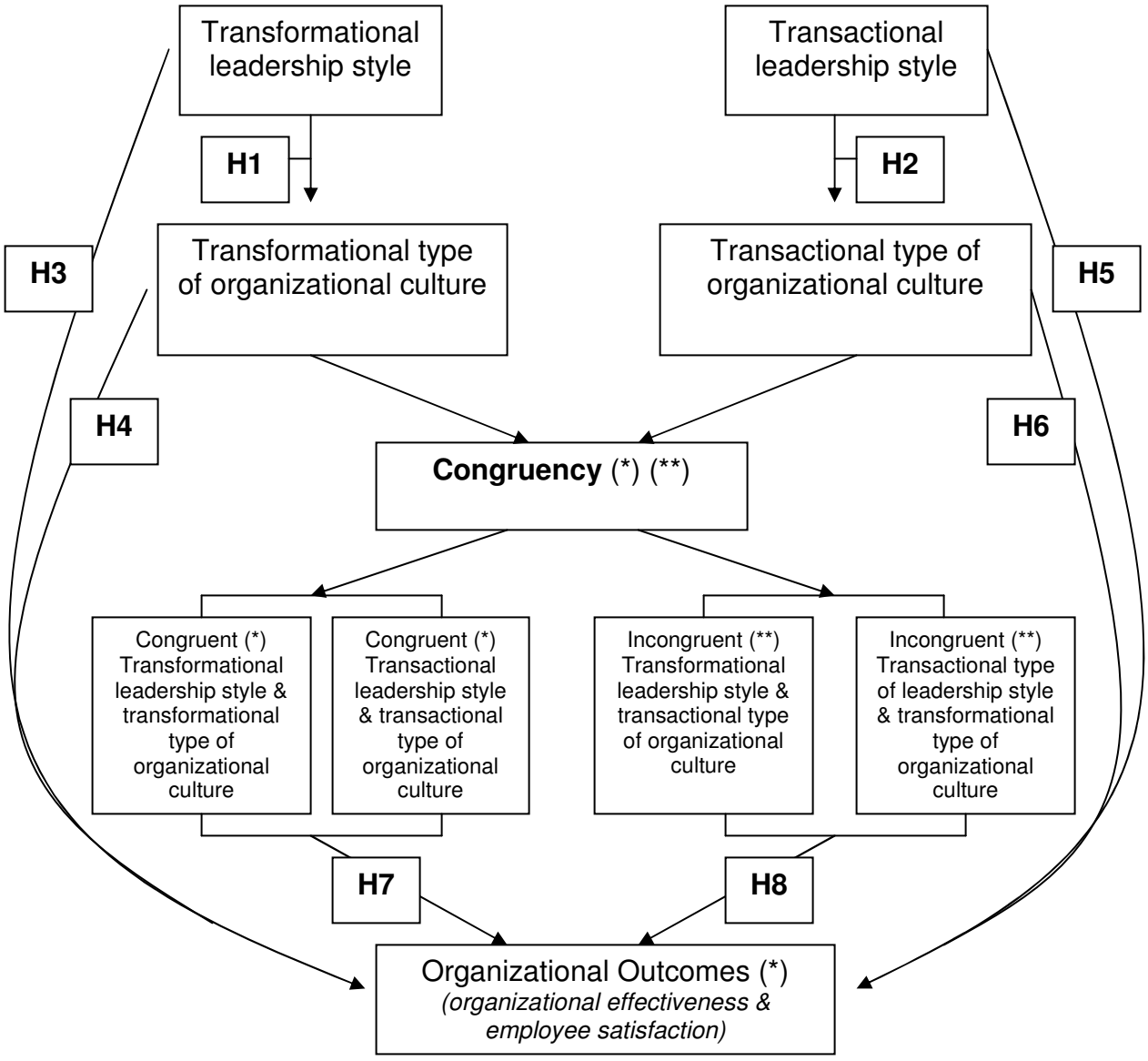
H8. An incongruous relationship between leadership style and type of organizational cultures will result in low organizational outcomes (employee satisfaction and organizational effectiveness).

Bass and Avolio (1993) proposed a conceptual model (Figure 1) that related a full spectrum of leadership styles and types of organizational cultures leading to improved organizational outcomes, including organizational effectiveness and employee satisfaction. Other researchers have argued that a similar relationship exists (Kazemek, 1990a; Schwartz, Tumblikin, & Peskin, 2002). In addition, an incongruity between leadership styles and types of organizational culture negatively effects staff satisfaction and organizational effectiveness (Schein, 1995). However, Bass and Avolio did not empirically research the relationship to organizational effectiveness and employee satisfaction. Although no research exists in the literature on this question for acute care hospitals, this research question will assist in understanding the effect of a congruous relationship between leadership style and organizational culture on the acute care hospital industry. The following chapter presents the study's methodologies with regard

to the investigation of the relationship of the leadership-culture dynamic in a healthcare setting.

Figure 1:

Conceptual Model



(*) (Bass & Avolio, 1993)
(**) (Schein, 1996; Rajnandini, 1995)

CHAPTER 3: METHODOLOGY

This research examined the impact of leadership styles and types of organizational cultures on organizational effectiveness and employee satisfaction in acute care hospitals. The introduction and the literature review chapters described the conceptual model, based on the work of Bass and Avolio (1993), which related a full spectrum of leadership styles and types of organizational cultures that lead to improved organizational outcomes, including organizational effectiveness and employee satisfaction. This chapter established the methodology of the research, following the conceptual model documented in Chapter 1. It described the research design, measurement instruments, data collection, and methods of analysis, followed by a chapter summary.

Research Design

This study used a descriptive, cross-sectional research design to determine the relationship of transformational and transactional leadership and similar transformational and transactional types of organizational culture to organizational outcomes. As a correlation study, this research also described relationships between variables and provided support either for or against a theoretical framework (Brink & Wood, 1998). This study used a self-reporting questionnaire to assess independent and dependent variables (Portney & Watkins, 2000). It also collected organizational demographic data on the respondents to understand the populations surveyed.

The independent variables under study include (a) transformational leadership, (b) transactional leadership, (c) non-leadership style, (d) transformational type of organizational culture, and (e) transactional type of organizational culture. Additional

independent variables include (f) transformational leadership and transformational organizational culture, (g) transformational leadership and transactional organizational culture (h) transactional leadership and transactional organizational culture, and (i) transactional leadership and transformational organizational culture. The dependent variables are (a) employee satisfaction and (b) organizational outcomes. This descriptive cross-sectional study measured the participants once to establish an association between the variables.

Measurement Instruments

A sampling of employees from acute care hospitals would complete a three-part survey questionnaire. The questionnaire's measurement tools consisted of the following three sections:

1. A brief demographic sheet defines the size of the organization, its profit or non-profit status, size of the hospital, tenure of the respondent in their employment position, and job title of the individual completing survey.

2. The Multifactor Leadership Questionnaire (MLQ - Form 5X) (Avolio, Bass, & Jung, 1999; Avolio & Jung, 1999; Bass & Avolio, 1997; Bass & Avolio, 1999).

3. The Organizational Description Questionnaire (ODQ) (Bass & Avolio, 1993).

A review of the MLQ - Form 5X and the ODQ, including relevant research literature on the individual measurement instruments as well as an overview of published research on their reliability and validity, follows.

Multifactor Leadership Questionnaire (MLQ) - Form 5X

Bass and Avolio (2000) developed the MLQ - Form 5X to assess transformational, transactional, and laissez-faire leadership factors. The MLQ - Form 5X

is an appropriate measurement tool to assess the full range of leadership factors (Vandenberghe, 1999), and has been previously validated (Avolio, Bass, & Jung, 1999; Avolio & Jung, 1999; Bass, 1985; Bass & Avolio, 1994). Bass (1998) had originally referred to these leadership tools as the full continuum of leadership styles. The MLQ - Form 5X (Bass & Avolio, 1997) consists of a 45-item questionnaire using a 5-point Likert scale. Of the MLQ survey's 45 items, 36 represent the nine leadership factors and 7 assess organizational outcomes, 3 of which assess organizational effectiveness and 4 the level of employee satisfaction. The MLQ - Form 5X purchased from Mind Garden, Inc. would not grant permission for the publication of the full questionnaire. Mind Garden did allow for a small section to be reprinted (Appendix A). Table 2 identifies the style items from the MLQ - Form 5X.

Table 2
Multifactor Leadership Questionnaire (MLQ) - Form 5X

Transformational leadership style		
	Instrument tool question number	Description
Idealized influence (attributed)	10, 18, 21, 25	Is admired, respected, and trusted
Idealized influence (behavior)	6, 14, 23, 34	Displays persistence, determination, and risk taking.
Inspirational motivation	9, 13, 26, 36	Involves employee in a vision of a better future
Intellectual stimulation	2, 8, 30, 32	Encourages innovation and creativity by questioning assumptions
Individualized consideration	15, 19, 29, 31	Accepts differences, acts as a coach or mentor
Transactional leadership style		
Contingent rewards	1, 11, 16, 35	Rewards individuals based on agreed-upon objectives
Management by exception (active)	4, 22, 24, 27	Actively monitors mistakes and takes corrective action
Management by exception (passive)	3, 12, 17, 20	Waits for mistakes to occur, then takes corrective action

Table 2
Multifactor Leadership Questionnaire (MLQ) - Form 5X (continued).

Laissez-faire leadership style		
Laissez-faire	5, 7, 28, 33	Resists making decisions
Extra-effort		
Extra-effort	39, 42, 44	Reflects employees' extra efforts beyond their expected level of performance or productivity as a result of leadership
Organizational effectiveness		
Organizational effectiveness	37, 40, 43, 45	Reflects leader's contribution to organizational effectiveness, leader's performance in employee work groups, leader's ability to meet the needs of employees, and responsiveness to employees' needs to achieve higher levels in the organization
Employee satisfaction		
Employee satisfaction	38, 41	Assesses employees' satisfaction with the organization and the leader in general

(Pratt, 2004)

The MLQ - Form 5X evaluates the incidence of nine leadership factors. These factors, defined earlier, are idealized influence (attributed), idealized influence (behavior), inspirational motivation, intellectual stimulation, individualized consideration, contingent rewards, management by exception (active), management by exception (passive), and laissez-faire management. Most questions on the MLQ - Form 5X measure behaviors, while only a few assess attributes or effects (Bass, 1999). Bass (1999) also noted that the MLQ - Form 5X successfully measures the full-range model of leadership (transformational to transactional) for small groups (micro-leadership), large organizations (macro-leadership), and leadership of movements and societies (meta-leadership) (Bass, 1999; Hater & Bass, 1998). The MLQ - Form 5X assesses leadership style by averaging the scores for each leadership scale. The leadership style with the highest value represents the predominant perceived leadership style for the

employee surveyed (Frittz, 2005). This survey tool also evaluates the organization's level of effectiveness and employee satisfaction. While there are multiple variations of this form, this research will use the employee-completed version. The MLQ - Form 5X section of the survey will take about 15 to 20 minutes to complete (Avolio et al., 1995).

The MLQ - Form 5X assesses leadership in both business and non-business environments. The instrument, which measures the leadership factors originally formulated by Bass, has undergone a number of revisions since developed in 1985 (Avolio et al., 1995). The authors developed the MLQ - Form 5X based upon the results of previous research to address concerns about its psychometric properties (Avolio et al., 1995). The MLQ - Form 5X is a shorter version than was what originally developed but is more valid (Avolio et al., 1995).

Effectiveness.

Bass and Avolio (1995) assessed the effectiveness of leaders as perceived by themselves or employees in four general areas. Effectiveness is determined by (a) meeting of the job-related needs of employees, (b) communication of employees' needs to management, (c) the leader's level of contribution to the organization's effectiveness, and (d) the leader's performance. Lowe, Kroeck and Sivasubramaniam (1996) also found the MLQ - Form 5X to be reliable in assessing organizational effectiveness when measured at the level of the employee. The researchers found that employee perception of effectiveness was more reliable than other types of organizational measures, such as scores on a test, percentage of goals accomplished, or financial indicators of performance. The authors speculated that employees may perceive

organizational effectiveness more narrowly or individually, as opposed to having a more widely accepted perception, as measured by the MLQ - Form 5X, noted above.

Satisfaction.

Bass and Avolio (1995) assessed employee satisfaction by how employees perceive a leader's skills and his or her willingness to develop a relationship with employees. Employee satisfaction is, in the context of this assessment, a measure of the employee's respect for the leader's style and practices. Satisfaction also involves how satisfied they are with their leader(s).

Validity and reliability of the Multifactor Leadership Questionnaire (MLQ) - Form 5X

The scales used in the MLQ - Form 5X (Avolio et al., 1995) have been found to be reliable and valid (Antonakis, 2003; Bass & Avolio, 1995, 1997; Bass, Avolio, Jung, & Benson, 2003; Bycio, Allen, & Hackett, 1995; Comrey & Lee, 1992; Hartog, Muijen & Koopman, 1996; Hater & Bass, 1988; Howell & Hall-Marenda, 1999; Lowe et al., 1996; Yammarino & Bass, 1990). Bass and Avolio (1995) based their assessment of reliability on a review of nine empirical studies that used the MLQ - Form 5X. The reliability scales were high, including those assessing outcomes. In a meta-analysis of 22 published and 16 unpublished studies, Lowe et al. (1996) found strong correlations between individual leadership factors and transformational and transactional styles. Avolio, Bass, and Jung (1999) concluded that the psychometric properties of the questionnaire confirmed the convergent and discriminate validity of the MLQ - Form 5X. Convergent validity determined that the scales were consistent with the intent and concept desired, while discriminate validity ensured that the indicators discriminated the measuring concept (Portney & Watkins, 2000). The goodness of fit index and reliabilities of the total items

and for each individual factor ranged from .74 to .94 (Avolio, Bass, & Jung, 1999). Avolio, Bass, and Jung (1999) noted that the reliabilities in each data set of the MLQ - Form 5X were reliable for the leadership style factors. Similarly, the MLQ - Form 5X was found to have high reliability as measured by Cronbach's alpha, which for each factor ranged from 0.67 to 0.93 (Jones, 1995). Lee (2005) found that, for individual item statements, reliability between the transformational and transactional leadership scales and outcome behaviors ranged from .74 to .83. Antonakis, Avolio, and Sivasubramaniam (2003) found that the MLQ - Form 5X is context specific, which is important when using it with a single organizational type or environmental condition, and that its validity is not questionable, as opposed to using the instrument in a broad aggregate, heterogeneous context. In assessing the validity and the reliability of the MLQ - Form 5X, these authors also found that it represented the full range of leadership factors. Convergent and discriminate validity for the MLQ - Form 5X has also been demonstrated (Avolio et al., 1995; Bass & Avolio, 1999). Given the reliability of the scales, this survey tool has been determined to be appropriate for this study.

Organizational Description Questionnaire (ODQ)

Bass and Avolio (1993, 1994) also developed the Organizational Description Questionnaire (ODQ). The questionnaire follows their leadership model in examining the extent to which an organization's culture includes transformational and transactional elements (I-Harn, 2001). The 28-item survey (Appendix B) comprises 14 items measuring transactional elements and 14 items measuring transformational elements in an organizational culture. The scoring of the survey produces a transactional cultural and a transformational cultural score. Table 3 identifies the style items from the ODQ.

Table 3
Organizational Description Questionnaire (ODQ)

	Instrument tool question number	Description
Transactional	1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27	Jobs are explicitly stated, commitments are short term, resources are negotiable
Transformational	2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28	Work is for the good of the team, improvement is continuous, commitments are long term.

(Pratt, 2004)

Bass and Avolio's (1993) research revealed varying levels of transactional and transformational elements**,** as pictured in Table 4. Transformational culture is determined by how employees perceive trust and innovation, and how employees' behaviors deviate from accepted operational standards (Parry & Proctor-Thomson, 2001). At the other extreme, transformational culture measures the degree to which the organization maintains the status quo and provides rewards. The questionnaire indicates an individual's perception of the statements as being true, false, or undecided (Parry & Proctor-Thomson, 2001). A response of true is represented by a +1 and a response of false by a -1, while an undecided score is given a 0. Parry and Proctor-Thomson (2001) noted that a low score indicates that the culture type is minimally evident and a high score indicates it is strongly evident in an organization. The mean scores of the organizational respondents describe the type of organizational culture.

Table 4
Transformational and transactional types of cultures as defined by the scoring of the Organizational Description Questionnaire

	Transactional type of organizational culture			
Transformational type of organizational culture		-14 to -6	-5 to +5	+6 to +14
	+6 to +14	Predominantly transformational	Moderately transformational	High-contrast
	-5 to +5	Loosely guided	Coasting	Contractual
	-14 to -6	Garbage can	Pedestrian	Predominantly transactional

(Bass, 1998; Bass & Avolio, 1993)

At the extremes, the more positive the transformational score, the more negative the transactional score indicating that an organization has a transformational culture, and vice versa (Bass & Avolio, 1993). A predominately-transformational culture has ongoing discussions of vision, values, and purpose within the organization (Bass, 1998). Formal agreements and leadership controls are lacking. The organization also encourages teamwork, where bottom-up decision making is encouraged, as are organizational growth and innovation (Bass, 1998). Within this organizational culture, new employees may have difficulty understanding limits and organizational expectations (Bass, 1998).

Within a moderately transformational culture, the organization gives more credence to the use of agreements and rewards (Bass, 1998). This organization also encourages the need for extra effort on the part of the employee (Bass, 1998). Because it includes some components of transactional culture, this organization better enables employees to understand what performance expectations (Bass & Avolio 1993).

Bass and Avolio (1993) noted that a high-contrast culture is defined when the score reveals high levels of both transformational and transactional elements. The parameters and the characteristics of this culture display conflict over which way the organization should proceed. While one sector may be seeking new approaches to problems, another may be holding onto past traditions and behaviors (Bass & Avolio, 1993). Conflicts occur between short-term gains or rewards and long-term benefits of the organization (Bass, 1998). Trust, however, maintains a balance between the organizations' seeking of the status-quo and the need for innovation (Bass, 1998).

The loosely guided organization is moderately transformational and has a limited organizational structure (Bass, 1998). The organization is very flexible. In this organizational culture, employees tend to be free to pursue their own goals, but they also form alliances. An example of this type of organization would be a consulting firm, where the employees may pursue their own paths but are committed to a larger organization, and may be committed to ensuring that the organization grows and strives to meet goals (Bass, 1998).

Moderate levels of both transformational and transactional elements usually are indicative of a poorly structured organization. Bass and Avolio (1993) defined this type of culture as coasting. Leadership is in the middle of the range, with the leader's activities maintaining the organization's current position so that little change occurs. This organization also fails to maximize its employee resources and opportunities (Bass, 1998).

Bass and Avolio (1993) defined a contractual culture as one with high transactional and low transformational elements. In this style, self-interest is more

important than the groups' interest. Internal negotiations drive the flow of work. The organization is stable, and its structure is multi-layered and centralized (Bass & Avolio, 1993). The organization is also rigid, mechanical, and controlling with top-down decision-making (Bass, 1998).

As noted earlier, the pedestrian culture (Bass & Avolio, 1993) lacks any transformational elements and is moderately transactional. Formal negotiations are required to complete tasks; little risk or change is accepted. Work is routine and mechanized (Bass & Avolio, 1993). This style exhibits management-by-exception leadership styles (Bass, 1998).

Finally, Bass and Avolio (1993) defined a garbage-can style, which lacks both transactional and transformational elements. There is little cooperation between employees and leaders, who exhibit anarchy. The garbage-can type of organizational culture presents no clear vision or objectives (Bass & Avolio, 1993).

Validity and reliability of the Organizational Description Questionnaire

Parry and Proctor-Thomas (2001) tested the ODQ scale for validity and reliability. Their study received 1354 completed surveys of managers from varying industries nation-wide. The authors concluded that the transformational construct of the ODQ is reliable and valid, while the transactional construct is reliable and valid when examined as one extreme element. Specifically, Parry and Proctor-Thomas found that the ODQ was reliable for measuring and categorizing transformational, transactional, and garbage-can elements. Similar to the aggregate of individual leadership construct factors, Parry and Proctor-Thomas (2003) classified the organizational cultural types as transformational if their scores were between 19 and 28, and transactional if their

scores were below 18. The authors found that the ODQ measurement scales were reliable with Cronbach's alpha, with internal consistency indicators adequate at 0.88 for transformational and 0.74 for transactional. The authors also found that the cultural scales correlated negatively with each other (r = -.61, p < .001). Their findings support the premise that the transformational/transactional scoring values represented by the ODQ scale are valid. Their study also validated earlier work by Bass and Avolio (1993) by noting that transformational culture correlated positively and transactional culture negatively with organizational effectiveness.

Demographic questions

As noted earlier, employees tend to be attracted to organizations, which are similar to their personal values (O'Reilly, 1991; Posner, 1992). A relationship between tenure, organizational culture, and outcomes has been established (Carroll & Harrison, 1998; Goll, Sambharya & Tucci, 2001). Alexander, Nuchols, Bloom, and Lee (1995) further argued that organizational demographics are associated with organizational cultures. These authors also reasoned that organizational demographics and competitive pressures in healthcare influence leadership styles. Alexander et al. (1995) demographic measures include level of the employees education, their tenure in their position, hospital ownership (not for profit vs. for profit), and organizational size.

In addition to the MLQ Form 5 X and ODQ, the questionnaire also includes a section for demographic data (Appendix C) to provide an understanding of the differences between the respondents. The eight demographic measures include gender, respondents' type of position in the organization, length of time in their current position and with the organization, organizational composition and size, and the organization's

status as for-profit or non-profit (Lawrence, 2000). The proposed demographic questions ensure that the respondents represent diverse organizations, leadership styles, and types of organizational cultures. Testing will not establish a causal relationship between demographics and the studies variables however; the information will provide background data and gives an additional perspective on the organizations and individuals respondents (Golding, 2003). The data measured will confirm the eligibility of the employees to participate in the study (worked in the organization for at least one year) and the diversity of the hospitals surveyed.

Limitations to the Proposed Study

A self-administered questionnaire will be used for this research study. The target population for this research will be composed of staff employees and managers of acute care hospitals. The target hospitals will be from the northeastern sector of the United States. The use of a self administered questionnaire is being used as it easy to administer, less intrusive, and more cost efficient compared to other data retrieval methods especially if the number of research questions is large (Portney & Watkins, 2000; Walonick, 2005).

Selection bias presents a potential limitation of this study. The research methodology seeks a random selection of both staff and management level employees. Some exclusionary selection process may occur without the knowledge of the primary researcher. Individual employee schedules, availability, and hospital operational requirements may restrict the selection of employees. Ethnic diversity, employee, and hospital organizational demographics were not addressed (Gabbert, 2005). It will be assumed that the respondents will be representative of the acute care hospital

employee pool (Coggon, Rose & Barker, 1997; Walonick, 2005). The target population surveyed this study may be generalizable only to the acute care hospital industry (Gabbert, 2005).

The study examines employees from eight acute hospitals. The study measures leadership and cultural perceptions from the point-of-view of the individual employee. Wegner (2004) noted that this approach, from the employee perspective would not be generalizable at the level of the organization. The study does not attempt to measure or correlate the perceived leadership style from the perspective of the employee with that of the organization's leaders. However, Parry (2004) suggested that Bass' early work on the MLQ, examining leadership from the perspective of the employee, was effective and valid in studying leadership styles of the organization.

A number of published research studies on leadership and cultural styles, only surveyed employees from one or two organizations (Eppard, 2004; Golding, 2003; Oluokun, 2003; Parry, 2004; Wegner. 2004). Oluokun (2003) noted that surveys of two organizations demonstrated divergent organizational cultures. Wegner (2004) supported this position and noted in the study's conclusion that a survey of three organizations would have increased the diversity of the respondents. Eppard (2004) suggested that more than one surveyed organization would have increased the potential to identify organizational subcultures. Eppard also suggested examining different respondent demographics to ensure a divergent population. Eppard defined the demographics to include length of employment, time in position, sex, and educational level. This study builds on these earlier aforementioned studies by increasing the number of organizations and the median number of employees surveyed.

Same source bias may be considered with regard to the fact that the respondents are being asked to rate their leaders leadership styles as well as their organizations type of culture. The same respondent may consider their leader to demonstrate a transformational leadership style, which may in turn influence the respondent to score the organizations culture as transformational. Parry, Proctor-Thomson (2003) assumed that this type of bias would not have an impact since the respondents would not have a clear understanding of the questionnaire scoring in order to influence the outcomes. In addition, Bowling (2005) found that self-administered questionnaires reduced this type of bias over face-to-face or telephone survey methods.

Prestige bias and construct validity occurs when a respondent answers a question in a manner in which it might make them feel better about themselves or their organization. If the written questionnaire is anonymous and the underlying hypotheses are unknown to the respondents, this bias is reduced (Gossnickle, & Raskin, 2001; Portney & Watkins, 2000). Written questionnaires, which have been previously validated and presented in a uniformed question format, as in the case of the proposed measurement tools for this research study, reduces the chance of measurement bias (Bowling, 2005; Coggon, Rose & Barker, 1997; Gossnickle & Raskin, 2001; Walonick, 2005).

Other limitations to this proposed study are noted below:

1. This research study represents the acute care environment at the time of the study as the respondents were surveyed one time (Gabbert, 2005).

2. There are numerous issues, both internal and external, at play in any organization, which may influence the organization's culture and the specific leadership

styles of its leaders. External influence may include the effect of State and Federal regulatory policies and procedures. Internal hospital board of governor directives and priorities, stability of the workforce, and socioeconomics of the community may also influence organizational outcomes, leadership styles, and cultures. These issues may influence the ability to determine if a causal relationship exists between the independent and dependent variables (Frittz, 2005).

Data Collection

A minimum sample size of 100 employees, supervisors and middle managers was determined to be statistically valid. A power analysis was also completed (Portney & Watkins, 2000). Since the value of *r* was unknown, it was necessary to turn to the literature. Relevant research literature reported sample sizes ranging from 15 to 231, with *r* values ranging from .27 to .82 with a mid-range of .465 (Eppard, 2004; Frittz, 2005; Gabbert, 2005; Hancott, 2005; Jong Hwa, 2005; Lawrence, 2000; McDaniel & Wolf, 1992; Morrison, Jones, & Fuller, 1997; Oakley-Williams, 2004; Stefffensen, 2005). Calculating for *N* with $r = .465$, alpha =.05, and power = 0.80, the required sample size would be 22 (Portney & Watkins). Using a sample size table with an alpha of 0.05 and power of 0.80, the sample size for $r = .40$ would be 37 participants (Cohen, 1988). Extrapolating for $r = .465$, as determined in the literature, would require 27 participants. The median sample size of the relevant research literature, reported above, indicated a sample size of 76. This study will use exceed the median sample size, which exceeds the minimum size of 27 recommended above. Assuming the response rate would be less than 100 percent, the primary researcher invited 120 employees to participate from eight (8) acute care hospitals. The hospitals invited to participate were diverse in terms

of size and composition, with half being small independent community hospitals and half being tertiary, teaching, or part of an integrated healthcare system. This study required 100 completed questionnaires. The primary researcher sought to collect survey responses from an even number of congruent and incongruent leadership and cultural types. Table 5 describes the intended respondent outcomes assignments. When the participant has answered all questions directly related to the independent and dependent variables, the questionnaire will be complete.

Table 5
Respondent Assignment

Groups	Minimum samples size
Congruent: (a) Transformational culture and transformational leadership, (b) transactional culture and transactional leadership	50
Incongruent: (c) Transformational culture and transactional leadership, (d) Transactional culture and transformational leadership	50

Participants were eligible for the study if employed by the hospital for at least 1 year. This ensured that the participants fully understand the hospital's leadership style and organizational culture. A sample of employees, supervisors, and middle managers participated in the study to give a broad distribution of both staff and management. The selection process involved the identification of every third employee at each hospital. This process ensured a random sampling. Prior research used the MLQ - Form 5X and ODQ questionnaires to have employees evaluate and describe their perceptions of a leader's leadership style and the organizational culture (Lawrence, 2000). These studies

measured responses of both employees and middle managers (Bass, 1985; Hater & Bass, 1988; Lawrence, 2000). In this study, the sample will comprise of employees from eight acute care hospitals not limited by profit status or bed size.

The researcher will distribute a cover letter to prospective acute care hospital administrators (Appendix D) that describes the background and objectives of the research, the level of confidentiality maintained, and the questionnaires, and that inquires into their level of support. If there is no response from the hospital within 2 weeks, a follow-up call will be made to the hospital administrators soliciting their support. Once individual hospitals approve participation in the study, the researcher will call to secure a location and time best suited to present the questionnaire and to identify participants. Data collection will require approximately 3 months, assuming some hospitals may require approval by their internal institutional review boards.

During the researcher's visit to the hospital, the researcher gave each participant a survey packet. The packet included a participant cover letter (Appendix E), a questionnaire instruction sheet (Appendix F), an informed consent sheet (Appendix G), and a complete questionnaire that includes the MLQ Form-5X, the ODQ, and the demographic questions. The participants completed the questionnaire during the researcher's visit. If the employee were not able to attend the meeting, an administrative designee followed up with the employee. The administrative designee would give a survey packet to the employee, which included a self-addressed envelope for the employee to return the survey directly to the primary researcher. The letter of introduction given to each participant noted that participation was voluntary and that the participant could stop at any point without any risk or penalty. The cover letter also

informed participants that participation in the study would not result in any risk or harm. Each respondent completed the survey questionnaire independently. It was assumed that the percentage of questionnaires completed will be high, since participants would attend the meeting voluntarily and at the invitation of the hospital administration. A number of employees were not able to attend the meetings due to their schedules. 107 usable surveys were received out of 120 distributed, with a response rate of 89.1 percent.

Confidentiality

Each questionnaire distributed had a four-digit coded serial number. The serial number, placed on the front of the questionnaire by the primary researcher, identified the hospital where it was completed (Pratt, 2004). Reporting of aggregate data and the use of a numerical coding system for the individual questionnaires maintained the confidentiality of the participants. The numerical coding system identified individual hospitals but not individual participants. The study would not report individualized participant or hospital names. Data would remain the property of the primary researcher, and third parties would not have access to it. In an effort to provide feedback on the outcome of the study, each individual hospital agreeing to participate would receive a copy of the completed study.

Informed consent/ethical considerations

Before data collection began, the Touro University International Institutional Review Board reviewed and approved the design protocol and survey tool for use in this study (Appendix H). To the extent required by the individual hospital institutional review boards, full applications would be completed and approved. No questions asked will put

the participant in any jeopardy or at any risk. No hospitals agreeing to participate asked for a review by their IRB Committee.

Data Analysis

Detailed descriptions of the multivariate and bivariant statistical tests are in Table 7. A review and discussion of tests follows. Descriptive statistics included an analysis of the means, standard deviations, and reliability scores for both demographics and leadership factors, and for organizational outcomes of the MLQ - Form 5X and organizational culture measures. Respondent demographics provided an understanding of the differences between the respondents. The eight demographic measures included gender, respondents' type of position in the organization, tenure in their current position and with the organization, size of the organizational, and the organization's status as profit or non-profit.

Factor analysis would analyze the scales of the measurement tools to determine how well they were fulfilling their intended purpose, as well as to examine the clustering of data. Factor analysis, including a Varimax rotation, also determined the interrelationship among the items and scales of the measurement tools, both the MLQ - Form 5X and the ODQ. This analysis assisted in determining whether the information from this specific population study mirrors the structure of the outcomes equal to published findings of similar studies. Cronbach's alpha analysis measured the reliability of the MLQ - Form 5X and ODQ measurement instruments. Bivariate Pearson's correlation coefficient determined the relationship between leadership style and type of organizational culture variables to determine the strength of the relationships between leadership factors and organizational cultural factors. Multiple linear regression analysis

determined the predictive relationship between leadership styles, types of organizational culture and outcomes, including employee satisfaction and organizational effectiveness (Portney & Watkins, 2000). The regression analysis also provided an understanding of the causal relationships between the variables (Portney & Watkins, 2000). The results of the regression analysis provided a best-fit line with the total squared error (Mertler & Vannatta, 2002). In turn, the regression provides a multiple correlation (R), regression coefficient (B), beta coefficient (B) and sum of squared residuals (Mertler & Vannatta, 2002).

Structural equation modeling (SEM) represents a family of statistical techniques for testing the validity of theoretical models. Mertler and Vannatta (2002) noted that path analysis and structural equation modeling are both subsets of a causal modeling strategy. One technique of structural equation modeling includes path analysis (Bentler & Bonett, 1980; Garson, 2006c). SEM also includes three approaches. The three approaches include *'strictly confirmatory,' 'alternative model,' and 'model development approach*' (Garson, 2006c). The *'strictly confirmatory approach'* of structural equation modeling determined if the variances in the data are consistent with the path model(s), further explained below. Garson (2006c) noted that the SEM does not draw causal arrows. Based upon a review of available research literature the researcher develops the causal arrows and theoretical model (Garson, 2006c). Mertler and Vannatta (2002) noted the difference between SEM or latent variable monitoring and path analysis is that SEM uses a computer model to provide an indication of the 'fit' between a theoretical model and an observed model.

Structural equation modeling provided a mechanism to determine the goodness-to-fit analysis for the path models (Anderson & Gerbing, 1988; Bentler & Bonett, 1980). The test determined if the variances in the data and the model were consistent. LISREL 8.8 for Windows calculated the goodness-to-fit using model chi-square and root means square residual ('RMR') (Browne & Cudeck, 1992; Garson, 2006c). Research literature supports the use of LISREL 8.8 structural equation modeling to identify associations between latent variables (Lin, Hwang & Tseng, 2006; Zeegers, 2002).

Path analysis assessed the mediating and causal effects between the variables (Preacher & Hayes, 2004). The path analysis provided a means to either accept or reject the conceptual model based upon the retrieved data (Mertler & Vannatta, 2002). The path analysis used regression analysis to perform the causal modeling, which in turn examined if a pattern of intercorrelations among the variables fit a pre-designed conceptual model (Mertler & Vannatta, 2002). The analysis determined the causal associations represented by the conceptual model (Figure 1). The conceptual model included indirect and total causal effects. Once the conceptual model wa established, a series of structural equations was developed (Mertler & Vannatta, 2002). The overall fit of the model in relation to the data determined if the conceptual model was consistent with the observed correlations or actual data (Mertler & Vannatta, 2002). If there was inconsistency between the model and data, the model was revised and recalculated. For the purposes of this analysis, the correlations and the follow-up comparisons to observed correlations were not obtained via a computerized program and were completed by hand (Mertler & Vannatta, 2002). This path analysis followed the guidelines established by Mertler and Vannatta (2002).

The conceptual model first represents the path analysis. Structural equations are developed, and z-score coefficients represent causality, which are analogous to the standardized regression β coefficients (Agresti & Finlay, 1997; Mertler & Vannatta, 2002). The regression β coefficient indicated the degree to which each variable contributed to the model (Garson, 2006b; Portney & Watkins, 2000). The coefficients are displayed and any correlations greater that $p<.05$ are then excluded. Reassessment of the model occurs if causal paths are either added or removed to determine fit (Mertler & Vannatta, 2002). The new redrawn model, supported by significant correlations, is the final theoretical model. The Mertler and Vannatta's (2002) approach, which incorporated the use of manually computed structural equations and subsequent computerized structural equation modeling to validate the overall fit of the model was used in this study.

Congruency assessment will be determined by the scoring of the measurement tools as noted below in Table 6. There will be two categories of congruency, either congruent or incongruent. Congruent leadership and organizational cultural types were categorized as either transformational leadership with transformational type of organizational culture or transactional leadership with transactional type of organizational culture. Incongruency will be either transformational leadership with transactional type of organizational culture or transactional leadership with transformational type of organizational culture. Scoring of the MLQ - Form 5X will differentiate transformational and transactional leadership styles. Yammarino and Dubinsky (1994 & 1995) classified transformational leadership style with a score of 3.69 and a standard deviation of .667. The authors classified transactional leadership style

with a score of 2.34 and a standard deviation of .65. Scoring of the ODQ will differentiate transformational and transactional organizational cultural types. Parry and Proctor-Thomas (2003) classified the organizational cultural types as transformational if their scores were between 19 and 28, and transactional if their scores were 18 or below.

Table 6
Determination of Congruency

		MLQ - Form 5X Leadership Scoring	
		Transformational Leadership Scores At or above 3.0	Transactional Leadership Scores at or below 2.99
ODQ Culture Scoring	Transformational Culture Scores at or above 19	Congruent	Incongruent
	Transactional Culture Scores at or below 18	Incongruent	Congruent

The dependent variables, listed above, were employee satisfaction and organizational effectiveness. Multiple regression analysis determined the predictive relationship between congruency and outcomes (Portney & Watkins, 2000). Continuous dependent and independent variables for H7 and H8 were used which support the use of multiple regression analysis.

Table 7 summarizes the bivariate and multivariate statistical analyses outlined in the methodology. The summary outlines the specific tests for each variable and presents a brief discussion where appropriate.

Table 7
Bivariate and Multivariate Analysis

Hypothesis and item studied	Variable Description	Statistical Test	Discussion
Respondent Demographics		Descriptive statistics	
Measurement Tools for MLQ (Form 5X) and ODQ.		Factor Analysis Verimax Rotation Cronbacks alpha analysis	To determine how well the measurement tools fulfilled their intended purpose as well as data clustering. Also assisted in determining if the information from the surveyed populations mirrors other published findings. (Bass & Avolio, 1995; Medley & LaRouchelle, 1995) Measure reliability of tools (McDaniel & Wolf, 1992)
H1. Transformational leadership styles will result in transformational type of organizational cultures.	Continuous Independent v. Continuous Dependent v.	Multiple regression Multivariate & Path Analysis	Predictive relationship between the leadership styles, cultural type and outcomes (Lawrence, 2000) Path analysis (as described by Mertler & Vannatta (2002), as well as structural equation modeling using LISREL 8.8 for Windows to calculate model chi-square and RMR
H2. Transactional leadership styles will result in transactional type of organizational cultures.	Continuous Independent v. Continuous Dependent v.	Multiple regression Multivariate & Path Analysis	See above description under H1.
H3. Transformational leadership will result in high organizational outcomes (employee satisfaction and organizational effectiveness)..	Continuous dependent and independent variables for Multiple Regression	Multiple regression Multivariate & Path Analysis	See above description under H1.

Table 7
Bivariate and Multivariate Analysis (continued)

Hypothesis and item studied	Variable Description	Statistical Test	Discussion
H4. Transformational type of organizational cultures will result in high organizational outcomes (employee satisfaction and organizational effectiveness).	Continuous dependent and independent variables for Multiple Regression	Multiple regression Multivariate & Path Analysis	See above description under H1.
H5. Transactional leadership will result in low organizational outcomes (employee satisfaction and organizational effectiveness)..	Continuous dependent and independent variables for Multiple Regression	Multiple regression Multivariate & Path Analysis	See above description under H1.
H6. Transactional type of organizational culture will result in low organizational outcomes (employee satisfaction and organizational effectiveness).	Continuous dependent and independent variables for Multiple Regression	Multiple regression Multivariate & Path Analysis	See above description under H1.
H7. A congruous relationship exists between leadership style and type of organizational culture will result in high organizational outcomes (employee satisfaction and organizational effectiveness).	Continuous dependent and independent variables for Multiple Regression	Multiple regression Multivariate & Path Analysis	Predictive relationship between the leadership styles, cultural type and outcomes (Lawrence, 2000) Path analysis (as described by Mertler & Vannatta (2002), as well as structural equation modeling using LISREL 8.8 for Windows to calculate model chi-square and RMR

Table 7
Bivariate and Multivariate Analysis (continued)

Hypothesis and item studied	Variable Description	Statistical Test	Discussion
H8. An incongruous relationship exists between leadership style and type of organizational culture will result in low organizational outcomes (employee satisfaction and organizational effectiveness).	Continuous dependent and independent variables for Multiple Regression	Multiple regression Multivariate & Path Analysis	See above description under H7
Path Analysis to determine the effect of type of organizational cultures as a mediating effect on organizational outcomes	Continuous dependent and independent variables for Multiple Regression	Path Analysis	Path analysis (as described by Mertler & Vannatta (2002), as well as structural equation modeling using LISREL 8.8 for Windows to calculate model chi-square and RMR

Normal distribution of the respondents allowed for the use of parametric testing. Chapter 4 would include an analysis of the data and of the relationships among these variables.

Summary

The objective of this research design and methodology was to determine the relationship between hospital leadership styles, organizational cultural types, and organizational outcomes. There was no empirical research within the acute care hospital environment on the relationships between the variables identified in the research study. Empirical evidence concerning the relationship among these variables would enhance the knowledge base within the hospital industry. This research used quantitative data to support the relationship and associations between the variables. This study would also be generalizable to the acute care and related hospital industry,

since many other healthcare organizations are facing similar organizational challenges and issues. The study used descriptive statistics, multiple regression, Pearson's correlation coefficient, and a path analysis to understand the associations and relationships among the variables.

Chapter 4 provides the results of the statistical analysis, while Chapter 5 includes the discussion, conclusions, and opportunities for future research. This study provides insight for hospital leaders in understanding the impact of the relationship between leadership styles and cultures on organizational outcomes.

CHAPTER 4: ANALYSIS OF DATA

This research examined the impact of leadership styles, types of organizational cultures on organizational outcomes in acute care hospitals. The introduction and the literature review chapters described the conceptual model, based on the work of Bass and Avolio (1993), which related a full spectrum of leadership styles and types of organizational cultures; these in turn lead to improved organizational outcomes, including organizational effectiveness and employee satisfaction. The methodology chapter described the research design, measurement instruments, data collection, and methods of analysis. This chapter presents the results of the data and of the descriptive and inferential statistics. It also includes a chapter summary.

Descriptive Analysis

This section will present data on the demographics of the respondents as well as the participating hospitals. This section will also present correlation analyses of data on the independent and dependent variables. The independent variables include transformational and transactional leadership styles and types of organizational culture as well as congruency, between leadership styles and types of organizational culture. The dependent variables include employee satisfaction and organizational effectiveness. Factor analysis, inferential testing of the hypotheses and a path analysis follows the descriptive analysis section.

Demographics data

The population surveyed for this study included 107 respondents from eight acute care hospitals in the northeastern United States. A total of 120 employees or respondents were contacted, and 109 completed surveys were received. Two of the

returned surveys were incomplete and thus unusable. The survey response rate was 89.2%. The demographic data represent responses from both individual hospitals and respondents. Tables 8 to 10 display the aggregated demographic data.

Of the respondents, 100% completed the demographic data section. The survey sought to understand eight separate factors. The first question asked the respondents to indicate their gender. The second question asked them to circle one of six age groupings. The choices were (a) ages 21-29, (b) ages 30-35, (c) ages 36-39, (d) ages 40-45, (e) ages 46-50, and (f) age 51 or older. The mean response for this question was 4.5, which represented ages 40-50; also, 74% of the respondents were females. Table 8 displays the distribution for gender and age.

Table 8
Demographics Data

Gender	26% male	74% female
Age	Age distribution	Percentage
	21-29	3.3
	30-35	8.7
	36-39	13
	40-45	15.2
	46-50	26.1
	> 51 years	33.7

Table 9 shows the position the respondents held at the time they completed the survey. The respondents had a choice of six categories: upper administration, department head, supervisor, clinical staff, non-clinical staff, or other. The largest distribution of respondents was among clinical staff (26%), non-clinical staff (25%), department heads (25%), and supervisors (15.4%).

Table 9
Position Held by Respondent at Time of Survey

Current Position	Percentage
Upper administration	2.6
Department head	25
Supervisor	15.4
Clinical staff	26
Non-clinical staff	25
Other	6

Table 10 indicates how long the respondents had been in their current position. Four categories were available to choose from; less than 1 year, 1 to 2 years, 3 to 4 years, and more than 5 years. The highest percentage of respondents had been in their current position for more than 5 years (64.1%), while the second highest had been in their current position for 1 to 2 years (19.6%).

Table 10
Respondents' Length of Time in Current Position

Years in current position	Percentage
< 1 year	5.4
1-2 years	19.6
3-4 years	10.9
> 5 years	64.1

The survey asked the respondents an open-ended question about the length of their tenure at their hospital. The responses ranged from 1.2 to 33 years, with a mean of 11.77 years. The standard deviation for the responses was 8.2 years. All respondents met the employment tenure requirement as defined by the proposal.

The survey asked each hospital that had agreed to participate to identify the number of beds that they were licensed to operate. Of the acute care hospitals

surveyed, the number of beds ranged from 90 (+/-) 10 beds to 1360 (+/-) 10 beds. In order to protect the confidentiality of each hospital the beds listed are (+/-) 10 beds. The mean number of beds was 566.75, with a standard deviation of 481.7 beds. Table 11 summarizes the number of licensed beds in each hospital.

Each hospital also stated whether it was part of a larger healthcare system. The responses indicated that 50% of the hospitals were independent and the other 50% part of a larger healthcare system. Those four hospitals that were part of a larger healthcare system stated how many hospitals were in their health system: Two indicated there were two hospitals in their system; one indicated there were three hospitals, and the other, four hospitals. The final question for the responding hospitals indicated that 100% were non-profit institutions. Table 11 summarizes the number of hospitals in each healthcare system.

Table 11
Number of Beds Licensed by Each Hospital

Hospital number	Number of respondents	Number of beds (+/- 10 beds)	Independent or part of larger healthcare system	Number of hospitals in each system
1	15	225	Part of larger system	2
2	15	230	Part of larger system	2
3	7	215	Independent	1
4	7	90	Independent	1
5	14	1360	Part of larger system	4
6	15	930	Independent	1
7	18	1045	Part of larger system	3
8	16	450	Independent	1
Total	107			

Table 12 describes the distribution of leadership style and type of organizational culture within each hospital as reported by the individual respondents. The distribution balanced between leadership styles and types of cultures as measured by the mean

scores. Individual hospital variances are extreme for the distribution of leadership styles and types of organizational culture. As an example hospital #4 had 57% of their employees report transformational leadership while only 14% reported transformational type of culture verses hospital #7 that had 28% report both transformational leadership and type of organizational culture. The role that the distribution of the styles plays in the development of congruency (leadership style and type of organizational culture) is beyond the scope of this study.

Table 12
Distribution of Leadership Styles and Types of Organizational Cultures by Hospital

Hospital Number	Number of Respondents	Transformational leadership style		Transactional leadership style		Transformational type of culture		Transactional type of culture	
1	15	11	(73.3%)	4	(26.7%)	9	(60.0%)	6	(40.0%)
2	15	9	(60.0%)	6	(40.0%)	9	(60.0%)	6	(40.0%)
3	7	1	(14.3%)	6	(85.7%)	7	(100%)	0	(0.0%)
4	7	4	(57.1%)	3	(42.9%)	1	(14.3%)	6	(85.7%)
5	14	5	(35.7%)	9	(64.3%)	5	(35.7%)	9	(64.3%)
6	15	10	(66.7%)	5	(33.3%)	5	(33.3%)	10	(66.7%)
7	18	5	(27.8%)	13	(72.3%)	5	(27.8%)	13	(72.2%)
8	16	10	(62.5%)	6	(37.5%)	7	(43.8%)	9	(56.2%)
Total	107	55	(51.4%)	52	(48.6%)	48	(44.9%)	59	(55.1%)
Mean		7		6		6		7.5	
SD		3.6		3.2		2.6		3.9	

The demographic analysis indicates that the respondents were evenly distributed. The respondents represented an even distribution of age groups, tenures within the organization, job positions, leadership styles, and types of organizational cultures.

Descriptive analysis of variables

Biavariate Pearson's correlation coefficient analyzed the relationship between transformational and transactional leadership style and types of organizational culture variables. Pearson's correlation also ascertained the strength of the relationships. Responses on the MLQ (Form 5X) and the ODQ were aggregated by either transformational or transactional leadership and types of organizational culture. Table 14 presents a correlation matrix between the variables.

Specifically, the Pearson's correlation between transformational leadership and type of organization culture was significant at $p < .001$ with $r = 0.451$. While this was a weak correlation, the test was significant at the 0.001 level. The Pearson's correlation between transactional leadership and type of organizational culture was significant at $p < .017$ with $r = 0.340$. As before, this was a weak correlation; however, the test was significant at the 0.05 level. The correlations do not indicate the presence of multicolinearity (Mertler & Vannatta, 2002). Multicolinearity would be problematic if the intercorrelations between the independent variables, used in the following regression analyses, were high (Mertler & Vannatta, 2002; Jenson, 2006). Mertler and Vannatta (2002) identified a number of concerns in the presence of multicolinearity. They noted that the independent variable(s) regression coefficient would be limited, or a distortion of the effect of the independent variable(s). The cause of the distortion would be by an overlapping of the data. The regression analysis, below, describes further analysis of mulicollinearity. This analysis includes a presentation of the variance inflation factor (VIF) for each independent variable (Mertler & Vannatta, 2002). The variance inflation factor (VIF), tests for mulitcollinearity and indicates the presence of a linear relationship

between the independent variable and any other remaining variables. A VIF value greater than 10 is a cause of for concern (Mertler & Vannatta, 2002).

Table 13
Descriptive Statistics of Variables

Variables	Mean	*Standard Deviation*
Transformational leadership	3.01	0.67
Transformational type of culture	9.74	4.94
Transactional leadership	1.97	0.45
Transactional type of culture	-14.04	5.44

Table 14
Correlation Matrix of Variable

Variable	1	2	3	4	5	6	7	8
1. Transformational Leadership	1.00							
2. Transactional Leadership	.320***	1.00						
3. Transformational Culture	.450***	.072	1.00					
4. Transactional Culture	-.447*	.340*	-.641***	1.00				
5. Congrunent	.049*	-.135	.987	-.132	1.00			
6. Incongruent	.201	-.059	.255	-.106	-.031	1.00		
7. Effectiveness	.762***	.138*	.793***	-.562***	.728***	-.360*	1.00	
8. Satisfaction	.825***	.156*	.647***	-.443***	.726***	-.590***	-.256***	1.00

(p<.05), **(p<.01), *(p<.001) 1. transformational leadership, 2. transactional leadership, 3. transformational culture, 4. transactional culture, 5. congruent, 6. incongruent, 7. efficiency, 8. satisfaction*

Descriptive analysis of congruency scores

The following section provides an overview of the congruent and incongruent groups. As will be further described later, the leadership style and type of organizational

culture were determined for each respondent and the scores transformed by determining their mean scores. Those that had a combined transformational leadership style and type of organizational culture were congruent, as were those with a combined transactional leadership style and type of organizational culture. Conversely, incongruent were those with transformational leadership style and transactional organizational culture, or vice versa. Table 15 presents the mean scores, standard deviation (SD) and their ranges. Table 16 presents the congruency results by hospital. The distribution of congruency and incongruency reported by each hospital were not evenly distributed. As an example, 66.7% of the employees from hospital #1 reported congruency while only 14.3% of employee survey in hospital #4 reported congruency.

Table 15
Congruent and Incongruent Descriptive Statistics

	N	Mean score	*SD*	Minimum score	Maximum score
Congruent (leadership style & type of culture)	57	2.51	11.02	-10.16	15.98
Congruent effectiveness	57	2.98	0.96	0.5	4.0
Congruent satisfaction	57	2.89	1.05	0.5	4.0
Incongruent (leadership style & type of culture)	50	1.35	8.38	-9.15	15.04
Incongruent effectiveness	50	2.54	0.66	.75	4.0
Incongruent satisfaction	50	2.68	0.56	1.75	4.0

Table 16
Congruent and Incongruent Descriptive Statistics

Hospital number	Number of respondents	Congruent responses	Incongruent Responses	Percentage of distribution	
				Congruent	Incongruent
1	15	10	5	66.7	33.3
2	15	6	9	40.0	60.0
3	7	1	6	14.3	85.7
4	7	1	6	14.3	85.7
5	14	6	8	42.9	57.1
6	15	10	5	66.7	33.3
7	18	14	4	77.8	22.2
8	16	9	7	56.3	43.7
Total	107	57	50	53.3	46.7

A Pearson's correlation coefficient determined the strength of the relationship between the two independent variables (congruent and incongruent leadership style and type of organizational culture) as well as the dependent variables, (organizational outcomes). Table 14 presented the results of the congruency correlations. The congruent correlations also did not indicate the presence of multicolinearity (Mertler & Vannatta, 2002; Jenson, 2006). Similarly, the incongruent correlations did not indicate multicolinearity. As noted earlier, the following regression analysis further analyzes mulitcolinearity. This finding also supports the fact that the variables were not redundant.

The congruent groups showed a stronger correlation than did the incongruent groups. The dependent (organizational outcomes) and independent variable groups (congruent and incongruent) were not intercorrelated. This result indicated that each independent variable correlated only with its corresponding dependent variables. The descriptive analysis indicated that the mean congruent (leadership style and type of organizational culture) scores were higher than the corresponding incongruent scores. Similarly, the congruent organizational outcomes scores were higher than the incongruent outcome scores. Table 17 summarizes the results of the correlation analysis between congruency and organizational outcomes.

Table 17
Summary of Congruent and Incongruent Correlations

1. Congruent independent variable only correlates with congruent dependent variable of employee satisfaction and organizational effectiveness.
2. Incongruent independent variable only correlates with incongruent dependent variable of employee satisfaction and organizational effectiveness.
3. Congruent scores do not correlate with incongruent scores and congruent organizational outcomes do not correlate with incongruent organizational scores.

Test for normality and homoscedasticity

Test of the dependent variables ensured that the assumptions used for the multiple regressions were in place. The values of skewness and Kurtosis assessed the normality of the dependent variables (George & Mallery, 2001; Mertler & Vannatta, 2002). A normal keytosis value would be zero; however, a value of +/- 1.0 was acceptable (George & Mallery, 2001). The keytosis values, listed in Table 18, fell within the guidelines defined by George and Mallery. The skewness measure of normality described the symmetry of the distribution of the data around mean (George & Mallery, 2001). As with kurtosis a skewness value of +/- 1.0 was acceptable (George & Mallery, 2001). The skewness values fell within the acceptable guidelines defined by George and Mallery.

Homoscedasticity was tested by determining if the residuals of the dependent variable scores were approximately equal by examining the regression scatterplots (Mertler & Vannatta, 2002; Regression, n.d.). A review of the scatterplots of the 'Regression Standardized Residual' verses the 'Standardized Predicted Values' appeared to indicate that the data was consistently spread out, supporting the presence of normality and homoscedasticity (Mertler & Vannatta, 2002). Appendix I includes the scatterplots for the dependent variables. The findings indicated normality in the distribution as well as homoscedasticity. Table 18 presents the descriptive statistics for the dependent variables and results of normality.

Table 18
Dependent Variables – Descriptive Statistics including Normality and Homoscedasticity

Dependent Variables	Mean	Standard Deviation	Skewness	Kurtosis
Effectiveness	3.11	.869	-0.823	-0.532
Employee Satisfaction	3.06	.944	-0.783.	-0.435

A Pearson's correlation determined if the transformational and transactional organizational scores were significantly different. It also ascertained the strength of the relationship between the variables. The correlation between transformational effectiveness and transactional effectiveness was not significant at r= -0.244, p=.111. Similarly, the correlation between transformational and transactional employee satisfaction was not significant at r= -0.144, p= .350. There was no correlation between transformational and transactional organizational outcome scores. The lack of correlation supports the proposition that the transformational and transactional outcome scores are different. The mean score of the transformational efficiency was 3.67 verses the transactional score of 2.51, while the mean transformational employee satisfaction score was 3.71, whereas the transactional was 2.36.

The following sections present the data analysis for the factor analysis as well as each of the hypotheses. The path analysis follows the analysis of hypotheses. A summary of the hypotheses testing is also included.

Factor Analysis and Cronbach's Alpha

The research proposal sought to determine how well the MLQ (Form 5X) fulfilled its intended purpose and how those data were clustered using factor analysis. Factor

analysis would also assist in determining whether the data clusters from the MLQ (Form 5X) mirrored other published findings. The component matrix (Table 19) provides information on the factor loading and represents the correlation coefficients between the variables. The rows represent the variables and the columns the factors. This analysis provided the basis for determining the level of significance for the component groupings. Correlations above 0.6 were considered high and those below 0.4 were considered low (Garson, 2006a). The eigenvalue measured the variances, which the factors accounted for. In addition, the measure indicated those with a low eigenvalue, which contributed little to understanding the variances. The data matrix produced three output factors, which were also consistent with the Kaiser rule, whereby all possible components with eigenvalues lower than 1.0 are eliminated (Garson, 2006a).

The output of this analysis indicated that idealized influence (attributed), individualized consideration, intellectual stimulation, idealized influence (behavior), inspirational motivation, and contingent rewards formed one factor. Management-by-exception active and passive formed the second factor, and laissez-faire represented the final factor. The varimax rotation of the factor axis optimized the variance on the variables in the factor matrix, so that each factor (column) would have a large or small loading (values within the matrix). This process allowed for the identification of each variable (rows) within a single factor (Garson, 2006). Factor analysis for the ODQ (cultural scale) was significant for only one factor, that of transformational culture at 0.904. There was no rotation because SPSS 10.1 produced only one factor, with an eigenvalue of 1.63.

Cronbach's alpha for the MLQ (Form 5x) responses provided a reliability coefficient of 0.64, which was on the low side of the accepted scale. When Cronbach's alpha is low, the data may be multidimensional (*Cronbach's alpha*, n.d.); this was demonstrated by the positive finding uncovered in the factor analysis. Cronbach's alpha for the ODQ (cultural scale) was 0.69. The Cronbach's alpha output for the ODQ was moderately significant (Garson, 2006).

Table 19
Factor Analysis With Varimax Rotation

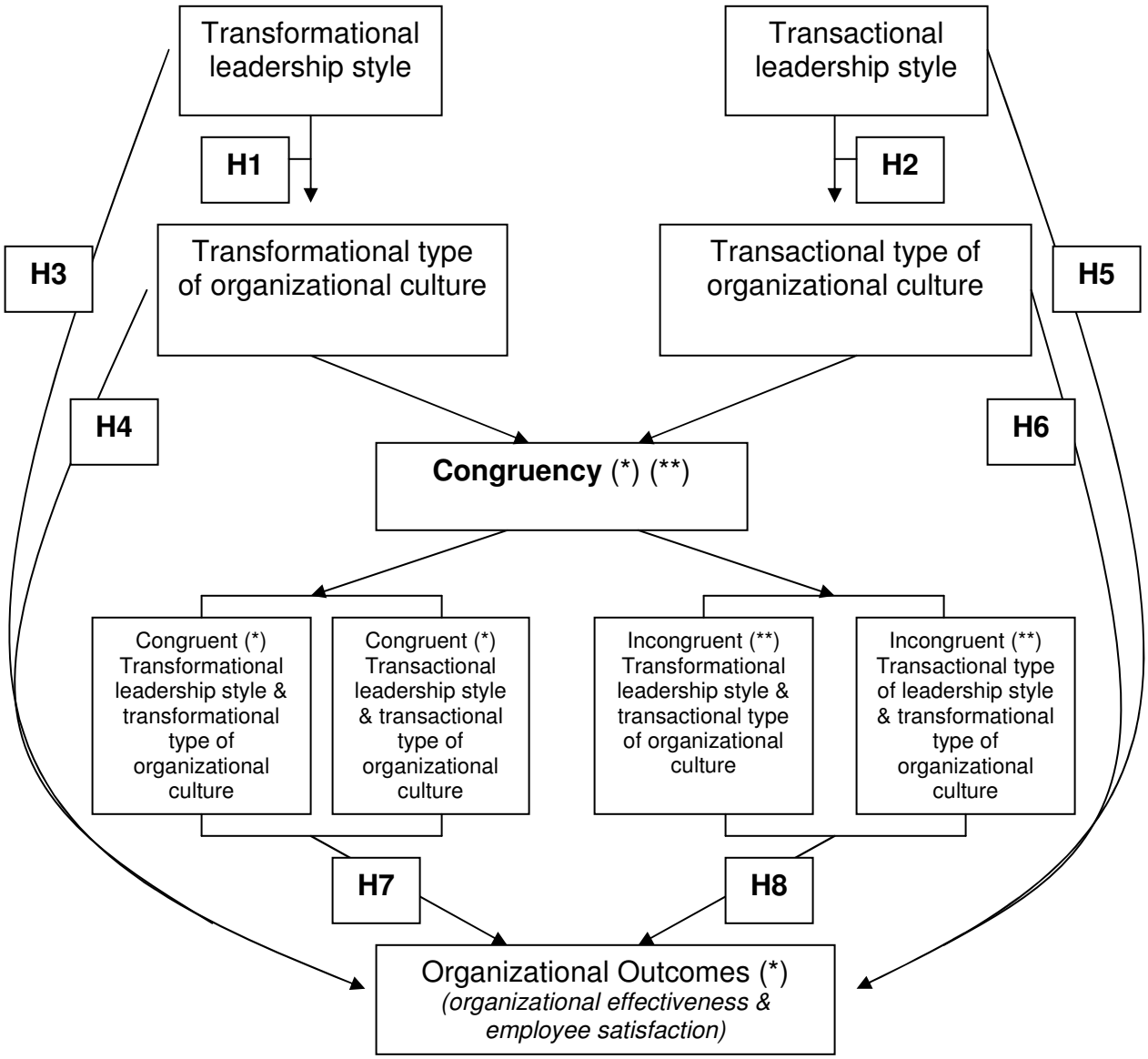
Variables	Factors or components		
	1	2	3
Idealized influence (attributed)	.914		
Individualized consideration	.864		
Intellectual stimulation	.833		
Idealized influence (behavior)	.788		
Contingent rewards	.751		
Inspirational motivation	.736		
Management by exception (passive)	-.116	.916	
Management by exception (active)	-.303	.877	
Laissez-faire	-3.53	-3.02	.964

Hypotheses Testing

Below is the inferential testing output for each of the hypotheses. The data analysis includes presentation of data, data tables, and a determination of weather the hypothesis was accepted or rejected. The conceptual model (Figure 1), reprinted below, was originally discussed in chapter 1 - Introduction and in chapter 2 - Literature Review. The model provides a pictorial representation of the hypotheses. Analysis of hypotheses where interrelated are combined. As an example, hypotheses 3 and 4 predicted that transformational leadership style and type of culture would positively influence organizational outcomes.

Figure 1:

Conceptual Model



(*) (Bass & Avolio, 1993)
(**) (Schein, 1996; Rajnandini, 1995)

H_1. A transformational leadership style will result in a transformational type of organizational culture.

A regression analysis determined if the independent variables (transformational leadership style) predicted the dependent variable (transformational type of organizational culture. An examination of the correlation matrix can determine the presence of Multicolinearity. However, the use of a statistical analysis is preferable (Mertler & Vannatta, 2002). The variance inflation factor (VIF), tests for mulitcollinearity and indicates the presence of a linear relationship between the independent variable and any other remaining variables. A VIF value greater than 10 is a cause of for concern, the VIF value of this regression is between 1.0 and 2.0 (Mertler & Vannatta, 2002). As multicolinearity is within acceptable limits, no elimination or combination of the variables is required. Regression outcomes indicated that transformational leadership style significantly predicted transformational type of organizational culture, R=.451, R^2=.204, R^2adj=.195, $F(1, 104)$=22.53, p<.001. The addition of demographic control variables did not influence the original regression model. The control variables included years of employment, age of the employee, current position within the hospital, number of hospitals within their health system, number of beds in the hospital, gender of the employee, and number of years in their position. This regression model accounted for 20.4% of the variance in type of organizational culture. Therefore, the hypothesis was accepted.

Table 20 summarizes the regression model. Table 20 also presents the bivariate and partial correlation coefficients between the predictor (transformational leadership

style) and transformational type of organizational culture. Table 20 also includes the coefficients for each demographic control.

Table 20
Regression Analysis – H_1

Regression Model					
	R	R^2	ΔR^2	*Standard Error*	β
Model	.451	.204	.194	4.434	.451

	SS	*MS*	*F*	*Sig. F* Δ
Regression	442.9	442.9	22.53	0.000
Residual	1730.2	19.7		
Total	2173.1			

	Coefficients B	*Standard Error*	*t Stat*	*P*	Lower 95%	Upper 95%	VIF
a.	-.185	2.144	-.086	.032	-4.445	4.075	
b.	3.30	.696	4.746	.000	1.919	4.684	1.23
c.	.178	.060	2.95	.004	.06	.29	1.44
d.	-.698	.350	-1.98	.05	-1.39	.002	1.21
e.	.539	.367	1.46	.146	-.19	1.27	1.69
f.	1.782	.767	2.32	.023	.26	3.31	1.67
g.	3.044	.001	-2.26	.026	-.006	.000	1.67
h.	.452	.988	.457	.649	-1.51	2.42	1.06
i.	.125	.530	.236	.814	-.923	1.18	1.48

a. Predictor: (Constant)
b. Transformational leadership
c. Years of employment at hospital
d. Age of employee
e. Current position within hospital
f. Number of hospitals within health system
g. Number of beds in hospital
h. Gender of employee
i. Number of years in current position

Dependent variable: Transformational type of organizational culture. Model R^2=.204, p<.001; *B* = unstandardized regression coefficient; β = Beta standardized coefficient, *R* = correlation; R^2 = *multiple correlation squared;*ΔR^2= change in correlation squared; *MS = mean squares; SS = sum of squares; VIF=variance inflation factor*

H_2. A transactional leadership style will result in a transactional type of organizational culture.

A regression analysis determined if the independent variables (transactional leadership style) predicted the dependent variable (transactional type of organizational

culture. Regression outcomes indicated that transactional leadership style significantly predicted transactional type of organizational culture, R=.340, R^2=.130, R^2adj=.103, F(1, 104)=4.92, p<.05. This model accounted for 13% of the variance in type of organizational culture. Therefore, the hypothesis was accepted.

The addition of demographic control variables to the regression influenced the original model. The control variables with p<.05 were hospital was part of a health system, bed size, years of employment at the hospital, and age of the employee. This model is expressed as R=.607, R^2=.369, R^2 adj=.308, F(1, 104)= 6.058, p<.001. This model accounted for 36.9% of the variance in transactional type of organizational culture. Table 21 summarizes the regression model. Table 21 also presents the bivariate and partial correlation coefficients between the predictor (transactional leadership style) and transactional type of organizational culture.

Table 21
Regression Analysis – H_2

Regression Model							
	R	R^2	ΔR^2	*Standard Error*	β		
Model	.340	.130	.103	6.141	5.71		
	SS	*MS*	*F*	*Sig. F* Δ			
Regression	1.85.3	185.7	4.924	.033			
Residual	1244.7	37.7					
Total	1430.4						
	Coefficients B	*Standard Error*	*t Stat*	*p*	Lower 95%	Upper 95%	VIF
a.	25.79	5.24	-4.923	.000	-36.448	-15.137	
b.	5.71	2.56	2.219	.033	.475	10.951	1.00

a. Predictor: (Constant)
b. Transactional leadership

Dependent variable: Transactional type of culture; Model R^2=.130, p<.05; B = unstandardized regression coefficient; β = Beta standardized coefficient, R = correlation; R^2 = *multiple correlation squared;* Δ R^2= change in correlation squared; *MS = mean squares; SS = sum of squares; VIF=variance inflation factor*

Table 22 summarized the regression model, which included the demographic control variables. Table 22 also included the coefficients for each control. The demographic control variables minimally altered the model and increased the R^2 value. Table 22 includes those coefficients, which were not significant.

Table 22
Regression Analysis Including Demographics – H_2

Regression Model					
	R	R^2	ΔR^2	*Standard Error*	β
Model	.607	.369	.308	4.34	.71

	SS	*MS*	*F*	*Sig. F* Δ
Regression	911.30	113.91	6.058	.000
Residual	1560.65	18.80		
Total	2471.95			

	Coefficients B	*Standard Error*	*t Stat*	*p*	Lower 95%	Upper 95%	VIF
a.	.997	3.54	.282	.049	6.03	8.03	
b.	-4.12	1.58	-2.45	,016	-7.47	-.32	3.45
c.	5.47	.001	3.93	.000	.003	.008	1.55
d.	-.193	.065	-2.97	.004	-.321	-.06	1.46
e.	.921	.379	2.43	.017	.167	1.67	1.46
f.	.868	1.072	.81	.421	-1.27	3.00	1.08
g.	-.819	1.20	-.683	.497	-3.21	1.57	3.57
h.	-9.44	.390	-.242	.809	-870	.018	1.18
i.	5.71	2.56	2.219	.033	.475	10.951	1.00

a. Predictor: (Constant)
b. hospital is part of health system
c. Transactional leadership style.
d. Years of employed at hospital
e. Age of employee
f. Gender of employee
g. Number of hospitals within system
h. Current position within hospital
i. Number of beds in hospital

Model R^2=.369, p<.001; *B* = unstandardized regression coefficient; β = Beta standardized coefficient, *R* = correlation; R^2 = *multiple correlation squared;* ΔR^2= change in correlation squared; *MS = mean squares; SS = sum of squares; VIF=variance inflation factor*

H_3. Transformational leadership will result in high organizational outcomes (employee satisfaction and organizational effectiveness).

H_4. A transformational type of organizational culture will result in high organizational outcomes (employee satisfaction and organizational effectiveness).

A multiple linear regression analysis determined the predictive relationship between leadership styles, types of organizational culture, and outcomes (Lawrence, 2000). The regression analysis assessed which independent variables (transformational leadership style and/or transformational type of organizational cultures) predicted the dependent variable of organizational effectiveness. Regression outcomes indicated an overall model of the independent variable predictors (transformational leadership style and type of organizational culture) that significantly predicted organizational effectiveness, $R = .827$, $R^2 = .684$, $R^2\text{adj} = .677$, $F(1, 104) = 94.35$, $p < .001$. The addition of demographic control variables did not influence the original regression model. The control variables included transformational leadership style, and type of organizational culture, hospital which is part of a health system, number of beds within the hospital, years the employee was employed at the hospital, years in current position, age of the employee, number of hospitals in the health system, gender of the employee and current position within the hospital. This regression model accounted for 68.4% of the variance in organizational effectiveness.

Table 23 presents the relevant demographics. Table 24 summarizes the regression model. Table 24 also presents the bivariate and partial correlation coefficients between the predictor (independent variable) and organizational effectiveness. Table 24 also includes the coefficients for each demographic control.

Table 23
Descriptive Statistics

	Mean	*SD*	*N*
Organizational effectiveness	3.12	.861	107
Transformational leadership style	3.01	.676	107
Transformational type of organizational culture	9.74	4.94	107

Table 24
Regression Analysis – H_3 & H_4 (organizational effectiveness)

Regression Model

	R	R^2	ΔR^2	*Standard Error*	β
Model	.827	.684	.677	.489	.294

	SS	*MS*	*F*	*Sig. F* Δ
Regression	45.2	22.59	94.35	.000
Residual	20.8	0.24		
Total	66.0			

	Coefficients B	*Standard Error*	*T Stat*	*p*	Lower 95%	Upper 95%	VIF
a.	.133	.237	.522	.003	-.347	.594	
b.	.831	.090	4.353	.000	.028	.075	1.26
c.	1.03	.086	9.660	.000	.660	1.002	1.25
d.	-.219	.199	-.096	.276	-.616	.178	3.47
e.	.074	.000	.458	.648	.000	.000	1.77
f.	-4.57	.008	-.568	.574	-.021	.012	1.63
g.	4.28	.067	.636	.527	-.091	.177	1.488
h.	-1.55	.046	-.336	.738	-.107	.076	1.545
i.	3.55	.147	-.242	.810	-.329	.257	1.087
j.	-.732	.127	-.215	.831	-.280	.225	1.285
k.	-.904	.048	-.188	.852	-.105	.087	1.067

a. Predictor: (Constant)
b. Transformational leadership style
c. Transformational type of culture
d. hospital is part of health system
e. Number of beds in hospital
f. Years employed at hospital
g. Years in current position
h. Age of employee
i. Number of hospitals in the health system
j. Gender of employee
k. Current position within hospital

Model R^2=.684, p<.001; *B* = unstandardized regression coefficient; β = Beta standardized coefficient, *R* = correlation; R^2 = *multiple correlation squared;* ΔR^2= change in correlation squared; *MS = mean squares; SS = sum of squares; VIF= variance inflation factor*

The multiple linear regression analysis also assessed which independent variables (transformational leadership style and/or transformational type of organizational cultures) predicted the dependent variable of employee satisfaction. Regression outcomes indicated an overall model of the independent variable predictors (transformational leadership style and type of organizational culture) that significantly predicted employee satisfaction, $R = .836$, $R^2 = .699$, $R^2\text{adj} = .692$, $F(1, 104) = 101.04$, $p < .001$. The addition of demographic control variables to the regression did not influenced the original model. The control variables included, hospital which was part of a health system, years employed at the hospital, current position of the employee at the hospital, number of beds in the hospital, age of employee, number of hospitals within the health system, and the gender of the employee. This model accounted for 69.9% of the variance in employee satisfaction.

Table 25 presents the relevant demographics. Table 26 summarizes the regression model. Table 26 also presents the bivariate and partial correlation coefficients between the predictor (independent variable) and employee satisfaction. Table 26 also includes the coefficients for each demographic control.

Table 25
Descriptive Statistics

	Mean	*SD*	*N*
Employee satisfaction	3.06	.943	107
Transformational leadership style	3.01	.676	107
Transformational type of organizational culture	9.74	4.94	107

Table 26
Regression Analysis – H_3 & H_4 (employee satisfaction)

Regression Model					
	R	R^2	ΔR^2	*Standard Error*	β
Model	.836	.699	.692	.523	.146

	SS	*MS*	*F*	*Sig. F* Δ
Regression	55.36	27.68	101.04	.000
Residual	23.83	.274		
Total	70.19			

	Coefficients B	*Standard Error*	*t Stat*	*P*	Lower 95%	Upper 95%	VIF
a.	.404	.253	-1.575	.019	-.901	.105	
b.	1.06	.092	11.528	.000	.878	1.244	1.26
c.	2.79	.013	2.219	.000	.003	.053	1.25
d.	2.79	.013	2.219	.100	.003	.053	1.25
e.	-.348	.007	-1.25	.215	.024	.006	1.40
f.	.101	.048	1.06	.291	-.045	.147	1.28
g.	-.351	.000	-.770	.443	.000	.000	1.76
h.	.632	.045	.587	.559	-.063	.116	1.46
i.	.207	.147	.423	.579	-.230	.354	3.82
j.	-.061	.126	-.154	.870	-.270	.230	1.07

a. Predictor: (Constant)
b. Transformational leadership style
c. Transformational type of culture
d. Hospital is part of health system
e. Years employed at hospital
f. Current position within hospital
g. Number of beds in hospital
h. Age of employee
i. Number of hospitals within system
j. Gender of employee

Model R^2=.699, p<.001; *B* = unstandardized regression coefficient**;** β = Beta standardized coefficient, *R* = correlation; R^2 = *multiple correlation squared;* ΔR^2= change in correlation squared; *MS = mean squares; SS = sum of squares; VIF=variance inflation factor*

The results indicated that the transformational leadership style and type of organizational culture were predictive of both organizational outcomes, including organizational effectiveness and employee satisfaction. Thus, the regression model supported the acceptance of Hypotheses 3 and 4.

The results indicated that transformational leadership significantly affected the dependent variables of organizational effectiveness and employee satisfaction. While not as significant as leadership, transformational type of culture significantly affected the dependent variables of organizational effectiveness and employee satisfaction. The outcome of this analysis is significant in understanding the influence of leadership on organizational outcomes. Organizational type of culture, while not as significant as leadership style, the finding is important to the overall understanding of the impact of on outcomes.

H_5. Transactional leadership will result in low organizational outcomes (employee satisfaction and organizational effectiveness)

H_6. A transactional type of organizational culture will result in low organizational outcomes (employee satisfaction and organizational effectiveness)

The multiple linear regression analysis assessed which independent variables (transactional leadership style and/or transactional type of organizational cultures) predicted the dependent variable of organizational effectiveness. Regression outcomes indicated an overall model of the independent variable predictors (transactional leadership style and type of organizational culture) that predicted organizational effectiveness, $R = .628$, $R^2 = .394$, $R^2\text{adj} = .380$, $F(1, 104) = 28.27$, $p < .001$. This model accounted for 39.4% of the variance in organizational effectiveness. Table 27 presents the relevant demographics. Table 28 summarizes the regression model. Table 28 also presents the bivariate and partial correlation coefficients between the predictor (independent variable) and organizational effectiveness.

Table 27
Descriptive Statistics

	Mean	*SD*	*N*
Organizational effectiveness	3.12	.861	107
Transactional leadership style	2.07	.422	107
Transactional type of organizational culture	-.897	5.163	107

The addition of demographic control variables to the regression slightly influenced the original model. The control variables with p<.05 were the hospital was part of a health system, and the current position of the employee within the hospital. This model was expressed as R=.634, R^2=.401, R^2adj=.344, $F(1, 104)$= 6.956, p<.001. This model accounted for 40.1% of the variance in organizational effectiveness. Table 29 summarized the regression model, which included the demographic control variables. Table 29 also included the coefficients for each control. Table 29 also included those coefficients, which were not significant.

Table 28
Regression Analysis – H_5 & H_6 (organizational effectiveness)

Regression Model							
	R	R^2	ΔR^2	*Standard Error*	β		
Model	.628	.394	.380	.678	.299		
	SS	*MS*	*F*	*Sig. F* Δ			
Regression	26.01	13.0	28.266	.000			
Residual	40.02	.460					
Total	56.03						
	Coefficients B	*Standard Error*	*t Stat*	*p*	Lower 95%	Upper 95%	VIF
a.	3.04	.077	4.913	.000	1.057	2.494	
b.	-9.53	.014	6.830	.000	.123	.068	1.04
c.	.611	.171	3.578	.000	.272	.951	1.06

a. Constant
b. Transactional culture
c. Transactional leadership

Dependent variable: Organizational effectiveness; Model R^2=.394, p<.001; *B* = unstandardized regression coefficient; β = Beta standardized coefficient, *R* = correlation; R^2 = *multiple correlation squared;* ΔR^2= change in correlation squared; *MS = mean squares; SS = sum of squares; VIF=variance inflation factor*

The addition of demographic control variables to the regression slightly influenced the original model. The control variables with p<.05 were the hospital was part of a health system, and the current position of the employee within the hospital. This model was expressed as R=.634, R^2=.401, R^2 *adj*=.344, $F(1, 104)$= 6.956, p<.001. This model accounted for 40.1% of the variance in organizational effectiveness. Table 29 summarized the regression model, which included the demographic control variables. Table 29 also included the coefficients for each control. Table 29 also included those coefficients, which were not significant.

Table 29
Regression Analysis Including Demographics – Effectiveness H_5 & H_6

Regression Model					
	R	R^2	ΔR^2	*Standard Error*	β
Model	.634	.401	.344	.704	.31

	SS	*MS*	*F*	*Sig. F* Δ
Regression	27.566	3.446	6.956	.000
Residual	41.115	.495		
Total	68.681			

	Coefficients B	*Standard Error*	*t Stat*	*P*	Lower 95%	Upper 95%	VIF
a.	3.186	.661	4.821	.000	1.873	2.404	
b.	-9.53	.014	6.830	.000	.123	.068	1.04
c.	.611	.171	3.578	.000	.272	.951	1.06
d.	-.639	.284	-2.247	.027	-1.205	-.073	3.75
e.	-.128	.063	-2.033	.045	-.252	-.003	1.16
f.	.204	.189	1.076	.285	-.175	.582	3.37
g.	-.324	.062	-5.37	.593	-.156	.090	1.38
h.	-4.149	.010	-.403	.688	-.025	.016	1.41
i.	.085	.172	.355	.724	-.280	.402	1.05

a. Predictor: (Constant)
b. Transactional organizational culture
c. Transactional leadership style
d. Part of a health system
e. Current position within hospital
f. Number of hospitals within system
g. Age of the employee
h. Years employed
i. Gender of the employee

Model R^2=.401, p<.001; *B* = unstandardized regression coefficient; β = Beta standardized coefficient, *R* = correlation; R^2 = *multiple correlation squared;* ΔR^2= change in correlation squared; *MS = mean squares; SS = sum of squares; VIF=variance inflation factor*

The multiple linear regression analysis assessed which independent variables (transactional leadership style and transactional type of organizational culture) predicted the dependent variable of employee satisfaction. Regression outcomes indicated an overall model of the independent variable predictors (transactional leadership style and type of organizational culture) that predicted employee satisfaction, *R*= .565, R^2 *= .320,* R^2adj = .304*,* $F(1,104) = 20.43$, $p < .001$. This model accounted for 32% of the variance

in organizational effectiveness. Table 30 presents the relevant demographics. Table 31 summarizes the regression model. Table 31 also presents the bivariate and partial correlation coefficients between the predictor (independent variable) and employee satisfaction.

Table 30
Descriptive Statistics

	Mean	*SD*	*N*
Employee satisfaction	3.06	.943	107
Transactional leadership style	2.07	.422	107
Transactional type of Organizational culture	-.897	5.163	107

Table 31
Regression Analysis – H_5 & H_6 (employee satisfaction)

Regression Model

	R	R^2	ΔR^2	*Standard Error*	β
Model	.565	.320	.304	.787	.312

	SS	*MS*	*F*	*Sig. F* Δ
Regression	25.31	12.66	20.432	.000
Residual	53.89	.619		
Total	.016			

	Coefficients B	*Standard Error*	*t Stat*	*P*	Lower 95%	Upper 95%	VIF
a.	2.99	.419	3.678	.000	.709	2.376	
b.	-8.99	.016	5.551	.000	.122	.058	1.28
c.	.698	.019	3.521	.000	.304	1.092	1.29

a. Constant
b. Transactional culture
c. Transactional leadership style

Dependent variable: Employee satisfaction; Model R^2=.320, p<.001; *B* = unstandardized regression coefficient; β = Beta standardized coefficient, *R* = correlation; R^2 = *multiple correlation squared;* ΔR^2= change in correlation squared; *MS = mean squares; SS = sum of squares ;VIF=variance inflation factor*

The addition of demographic control variables to the regression influenced the original model. The control variables with p<.05 were if the hospital was part of a health system. This model was expressed as R=.600, R^2=.360, R^2 *adj*=.281, F(1, 104)= 4.560, p<.001. This model accounted for 36.0% of the variance in employee satisfaction. Table 32 summarized the regression model, which included the demographic control variables. Table 32 also included the coefficients for each control. The demographic control variables minimally altered the model and increased the R^2 value. Table 32 included those coefficients, which were not significant.

The results indicated that the transactional leadership style and type of organizational culture were weakly predictive of both organizational outcomes of organizational effectiveness and employee satisfaction, while they were positively correlated with organizational outcomes, as noted earlier. Thus, the regression model supported the acceptance of Hypotheses 5 and 6.

Table 32

Regression Analysis Including Demographics – Satisfaction H_5 & H_6

Regression Model	R	R^2	ΔR^2	*Standard Error*	B
Model	.600	.360	.281	.801	.160

	SS	*MS*	*F*	*Sig. F* Δ
Regression	29.248	2.925	4.560	.000
Residual	51.955	.641		
Total	81.203			

	Coefficients B	*Standard Error*	*t Stat*	*p*	Lower 95%	Upper 95%	VIF
a.	3.122	.826	3.78	.000	1.49	4.76	
b.	-8.99	.016	5.551	.000	.122	.058	1.28
c.	.698	.019	3.521	.000	.304	1.092	1.29
d.	-.688	.328	-2.09	.039	-1.34	.035	3.85
e.	-.103	.072	-1.43	.158	-.25	.041	1.18
f.	-.147	.013	-.912	.364	-.04	.014	1.62
g.	.314	.226	1.29	.168	.14	.765	3.72
h.	-.749	.000	.98	.331	.001	.000	1.85
i.	-9.89	.167	.45	.642	.26	.163	1.54
j.	-.104	.199	.26	.798	.35	.447	1.09
k.	.040	.073	.14	.887	-.135	.156	1.59

a. Predictor: (Constant)
b. Transactional organizational culture
c. Transactional leadership style
d. Part of health system
e. Current position within hospital
f. Years employed by hospital
g. Number of hospitals in system
h. Number of Beds
i. Years in current position
j. Gender of employee
k. Age of employee

Model R^2=.600, p<.001; B = unstandardized regression coefficient; β = Beta standardized coefficient, R = correlation; R^2 = *multiple correlation squared;* Δ R^2= change in correlation squared; *MS = mean squares; SS = sum of squares; VIF=variance inflation factor*

These results confirmed that the transactional leadership style did not have an overall positive effect on the dependent variables of organizational effectiveness and employee satisfaction. Again, the tests confirmed that the transactional type of organizational culture did have an overall effect on the dependent variables of

organizational effectiveness and employee satisfaction, but that it was less than the effects of the transformational type of organizational culture.

Analysis of congruency scores

H_7. A congruous relationship between leadership style and type of organizational culture will result in high organizational outcomes (employee satisfaction and organizational effectiveness).

H_8. An incongruous relationship between leadership style and type of organizational culture will result in low organizational outcomes (employee satisfaction and organizational effectiveness).

Congruent and incongruent scores were transformed by determining the mean score of each respondent's leadership style and type of organization scores. The leadership style and type of organizational culture were determined for each respondent. Those that had a combined transformational leadership style and type of organizational culture were congruent, as were those with a combined transactional leadership style and type of organizational culture. Conversely, those that had a transformational leadership style and transactional organizational culture, or vice versa, were considered incongruent.

Regression analysis determined which of the independent variables (congruent and incongruent leadership style and type of organizational culture) predicted the dependent variables of organizational effectiveness and employee satisfaction. Table 33 and 34 presents the bivariate and partial correlation coefficients between the predictor (independent variable) and the dependent variables (organizational

effectiveness and employee satisfaction.) The regression results indicated that a congruent leadership style and type of organizational culture were more predictive of both organizational outcomes than were the incongruent variables. Incongruency, while significant, was less predictive of organizational effectiveness than of employee satisfaction. Thus, the regression model supported the acceptance of Hypotheses 7 and 8. Table 35 presents a summary of the regression outcomes for each independent variable and related organizational outcome.

Specifically, the regression outcomes indicated an overall model of the independent variable predictors (congruency between leadership style and type of organizational culture) that predicted organizational effectiveness, R= .728, R^2 = .531, R^2adj = .523, $F(1,60) = 67.80$, $p < .001$. This model accounted for 53% of the variance in organizational effectiveness. Similarly, congruency predicted employee satisfaction, R= .726, R^2 = .528, R^2adj = .620, $F(1,60) = 67.01$, $p < .001$. This model also accounted for 53% of the variance in organizational effectiveness. Incongurency, predicated organizational effectiveness, R= -.360, R^2 = .130, R^2adj = .103, $F(1,48) = 4.77$, $p < .05$ and employee satisfaction, R= -.590, R^2 = .348, R^2adj = .328, $F(1,48) = 17.09$, $p < .001$. This model accounted for 13 and 35% of the variances respectively. The addition of demographic controls did not alter the original regression models. Tables 33 and 34 include the coefficients for each control as well as the independent and dependent variables.

Table 33

Regression Analysis – Congruent Variables

Regression Model							
	R	R^2	ΔR^2	*Standard Error*	*B*		
Model	.728	.531	.523	.660	.728		
	SS	*MS*	*F*	*Sig. F* Δ			
Regression	29.568	29.568	67.801	.000			
Residual	26.166	.436					
Total	55.734						
	Coefficients B	*Standard Error*	*t Stat*	*p*	Lower 95%	Upper 95%	VIF
a.	2.83	.086	32.83	.000	2.653	2.997	
b.	6.31	.008	8.234	.000	.048	.079	1.00
c.	.179	.107	1.672	.100	-.04	.39	1.69
d.	-.374	.230	-1.527	.110	-.84	.09	1.50
e.	.023	.000	.940	.351	.00	.00	1.41
f.	-.125	.073	-.699	.468	-.19	.09	1.68
g.	.123	.212	.580	.565	-.32	.55	1.23
h.	-6.84	.013	-.540	.592	-.03	.02	1.53
i.	1.924	.081	.235	.815	-.14	.18	1.25

a. Constant

b. Independent Variable: congruent (leadership and type of organizational culture)

c. Years in current position

d. Part of a health system

e. Number of beds in hospital

f. Age of employee

g. Gender of employee

h. Years in current position

i. Current position in the hospital

Dependent variable: Organizational effectiveness

Table 33 *(Continued)*
Regression Analysis – Congruent Variables

Regression Model							
	R	R^2	ΔR^2	*Standard Error*	*B*		
Model	.726	.528	.520	.726	.726		
	SS	*MS*	*F*	*Sig. F* Δ			
Regression	35.313	35.313	67.008	.000			
Residual	31.620	.527					
Total	66.932						
	Coefficients B	*Standard Error*	*t Stat*	*p*	Lower 95%	Upper 95%	VIF
a.	2.73	.095	28.81	.000	2.537	2.915	
b.	6.90	.008	8.186	.000	.052	.086	1.00
c.	3.135	.000	1.30	.199	.000	.001	1.413
d.	-.279	.257	-1.04	.288	-.793	.240	1.500
e.	4.54	.091	.498	.621	-.138	.229	1.249
f.	7.358	.120	.615	.541	-.166	.314	1.696
g.	-4.623	.082	-.563	.576	-.211	.199	1.683
h.	2.418	.014	.170	.865	-.026	.031	1.525
i.	-3.129	.236	-.132	.896	-.508	.445	1.233

a. Constant
b. Independent Variable: congruent (leadership and type of organizational culture)
c. Number of Beds
d. Part of a health system
e. Current position in the hospital
f. Years in current position
g. Age of employee
h. Years employed at the hospital
i. Gender of employee
Dependent variable: Employee satisfaction

B = unstandardized regression coefficient; *β* = Beta standardized coefficient, *R* = correlation; R^2 = *multiple correlation squared;* ΔR^2 = change in correlation squared; *MS = mean squares; SS = sum of squares; VIF=variance inflation factor*

Table 34

Regression Analysis – Incongruent Variables

Regression Model

	R	R^2	ΔR^2	*Standard Error*	*B*
Model	-.360	.130	.103	.5116	-.360

	SS	*MS*	*F*	*Sig. F* Δ
Regression	1.249	1.249	4.773	.036
Residual	8.376	.262		
Total	9.625			

	Coefficients B	*Standard Error*	*t Stat*	*p*	Lower 95%	Upper 95%	VIF
a.	3.42	.089	38.396	.000	3.214	3.604	
b.	-2.24	.010	2.185	.036	-.043	-.002	1.00
c.	-4.18	.449	.278	.360	-1.034	.504	2.99
d.	-8.55	.133	-.162	.525	-.358	.187	2.12
e.	-.118	.271	.090	.666	-.675	.439	1.42
f.	-5.571	.090	-.113	.541	-.240	.129	1.12
g.	7.067	.026	-.079	.789	-.046	.060	2.78
h.	-1.223	-.036	-.036	.890	-.193	.168	2.22

a. Constant

b. Independent Variable: incongruent (leadership and type of organizational culture)

c. Part of a health system

d. Years in current position

e. Gender of employee

f. Current position in the hospital

g. Number of beds

h. Age of employee

Dependent variable: organizational effectiveness

Table 34 *(Continued)*

Regression Analysis – Incongruent Variables

Regression Model					
	R	R^2	ΔR^2	*Standard Error*	*B*
Model	-.590	.348	.328	.440	-.590

	SS	*MS*	*F*	*Sig. F* Δ
Regression	3.134	3.314	17.097	.000
Residual	6.202	.194		
Total	9.516			

	Coefficients B	*Standard Error*	*t Stat*	*p*	Lower 95%	Upper 95%	VIF
a.	3.43	.077	44.690	.000	3.272	3.584	
b.	-3.65	.009	4.135	.000	-0.054	-.019	1.00
c.	-1.37	.050	-.405	.011	-.052	.034	1.17
d.	1.57	.011	.221	.145	-.240	.037	1.43
e.	-.115	.066	.235	.093	-.006	.020	1.41
f.	-.824	.325	-.552	.018	-.250	-.157	1.18
g.	3.937	.018	.442	.042	1.492	.077	3.07
h.	-.231	.194	.177	.244	-.166	.630	2.78

a. Constant
b. Independent Variable: incongruent (leadership and type of organizational culture)
c. Age of employee
d. Years employed by hospital
e. Current position in the hospital
f. Part of a health system
g. Number of beds
h. Gender of employee
Dependent variable: employee satisfaction

B = unstandardized regression coefficient; *β* = Beta standardized coefficient, *R* = correlation; R^2 = *multiple correlation squared;* ΔR^2 = change in correlation squared; *MS = mean squares; SS = sum of squares; VIF=variance inflation factor*

Table 35

Summary Results of Regression Analysis for Congruent and Incongruent Variables

Independent variables	Dependent variables	Output of the regression model
Congruent	Congruent organizational effectiveness	$R = .728$, $R^2 = .531$, R^2adj = .523, $F(1, 60) = 67.80$, $p < .001$.
	Congruent employee satisfaction	$R = .726$, $R^2 = .528$, R^2adj = .520, $F(1, 60) = 67.01$, $p < .001$.
Incongruent	Incongruent organizational effectiveness	$R = -.360$, $R^2 = .130$, R^2adj =.103, $F(1, 48) = 4.77$, $p < .05$.
	Incongruent employee satisfaction	$R = -.590$, $R^2 = .348$, R^2adj = .328, $F(1, 48) = 17.09$, $p < .001$.

The results of the regression analysis are significant in understanding the impact of congruency on organizational outcomes. The models and their impact on the variances are significantly different, whereby the congruent leadership and culture has a greater impact than incongruency, as suggested by the hypotheses. Incongruency is also has a less significant impact on effectiveness than on employee satisfaction, whereas the difference between outcomes from congruency is insignificant.

In summary, the tests indicated that incongruent leadership style and type of organizational culture did not have an effect on the dependent variables. The tests further suggested that incongruency had no affect on the dependent variables. The findings however, revealed that congruency positively influenced outcomes.

The aforementioned section presented the data analysis of the hypotheses. The following section presents the path analysis. The path analysis determines if a causal relationship exists between the variables.

Path Analysis

A path analysis was conducted to determine the causal effects of the transformational leadership style (Z_1), the transformational type of culture (Z_3), the transactional leadership style (Z_2), the transactional type of culture (Z_4), congruent leadership styles and types of culture (Z_5), incongruent leadership styles and types of culture (Z_6), organizational effectiveness (Z_7), and employee satisfaction (Z_8). Path analysis uses regression to establish a cause and effect relationship (Mertler & Vannatta, 2002; *Path Analysis*, n.d.). The path model (Figure 2) was developed from a review of the research and theoretical literature presented in chapters 1 and 2. The path model also represents the conceptual model (Figure 1). The variables ('Z_x') identified in

Figure 2 and Equation 1 represented the z-score coefficients, which were analogous to the standardized regression β coefficients (Agresti & Finlay, 1997; Mertler & Vannatta, 2002). The regression β coefficient indicated the degree to which each variable contributed to the model (Garson, 2006b; Portney & Watkins, 2000). The endogenous variables, identified in Equation 1, were the variables explained by the model (Mertler & Vannatta, 2002). Residuals (e) represented the effect of other determinants on the variables not considered in the conceptual, path model (Figure 2) or the reconstructed path model (Figure 3) models (Mertler & Vannatta, 2002). The individual correlation path decompositions created were in Equation 1. In the equations, (*r*) represents the correlation, (P) represents the path, and the subscripts define the specific path direction.

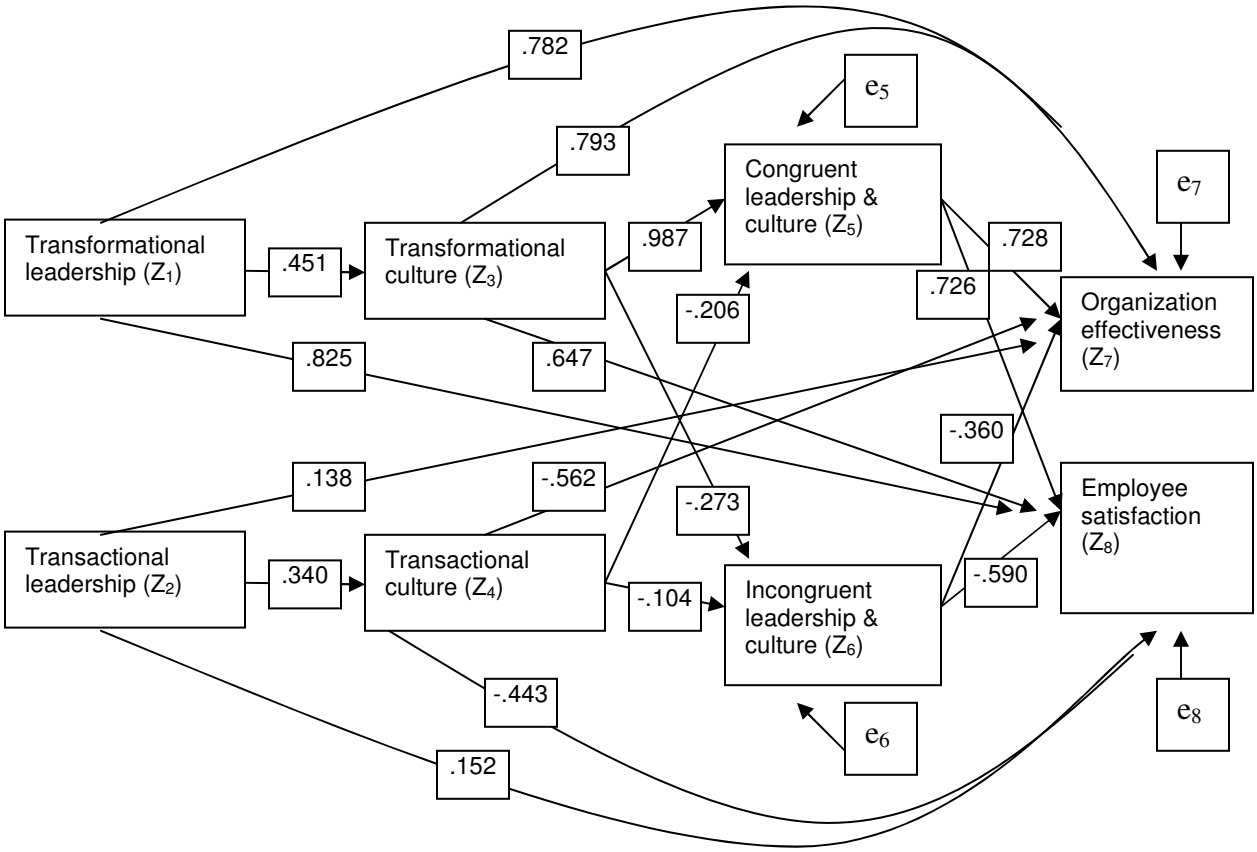
The path model in Figure 2 was not consistent with the data produced from the path decomposition equations, listed in Equation 1. The displayed path model (Figure 2) is displayed, consistent with the guidelines established for the development of a final path model by the research literature (Mertler & Vannatta, 2002). The data output of the equations is displayed in Table 36. Specifically, eight of the reproduced correlations were not significant, while five of the correlations exceeded a difference of .05. The non-significant paths (transformational culture (Z_3) on congruent (Z_5) leadership and culture, transformational culture (Z_3) on incongruent (Z_6) leadership and culture, transactional culture (Z_4) on congruent (Z_5) leadership and culture, and transactional culture (Z_4) on incongruent (Z_6) leadership and culture were removed (Mertler & Vannatta, 2002). The elimination of the non-significant paths allowed for the development of a reconstructed path model, as depicted in Figure 3. Table 36 presents the outcomes of the path decomposition for the reconstructed path model (Mertler & Vannatta, 2002). Three

items continued to exceed a difference of .05; however, all path coefficients in the reconstructed model (Figure 3) were significant at the .05 level. Table 37 presents the direct and indirect causal effects of the reconstructed path model.

The outcomes of interest were organizational effectiveness and employee satisfaction. The determinant with the largest total causal effect on satisfaction was transformational leadership (.844), followed by congruent leadership and type of culture (.728). Similarly, the determinant with the largest total causal effect on effectiveness was transformational leadership (.831), followed by congruent leadership and culture (.782). In contrast, the causal effect of incongruent leadership and type of culture on satisfaction was -.540, and on effectiveness -.370. Path 6 on Table 37 explained 69.7% of the variance in employee satisfaction, followed by Paths 1 (67.6%), 2 (53.1%), 4 (50.0%), 5 (32.8%) and 3 (13.0%). The reconstructed path model (Figure 3) suggests two independent models, one depicting transformational and transactional leadership styles (Z_1 and Z_2) and types of culture (Z_3 and Z_4), and the second depicting congruent (Z_5) and incongruent (Z_6) leadership and types of culture. Empirical data analysis did not support a direct causal relationship between the transformational and transactional leadership styles and types of culture on one hand, and congruent and incongruent leadership and types of culture on the other. The path diagram, despite the lack of empirical evidence to the contrary, should show a direct relationship between leadership (Z_1 and Z_2), type of culture (Z_3 and Z_4) and congruency (Z_5 and Z_6). The individual leadership and cultural scores created the congruency score. The following section provides a goodness of fit review of the reconstructed path model (Figure 3).

Figure 2.

Path model (Organizational outcomes of leadership and type of organizational culture).



Equations 1

Endogenous variables – Structural equations for path model (Figure 2)

$Z_3 = P_{31}Z_1$
$Z_4 = P_{42}Z_2$
$Z_5 = P_{53}Z_3 + P_{54}Z_4 + e_5$
$Z_6 = P_{64}Z_4 + P_{63}Z_3 + e_6$
$Z_7 = P_{75}Z_5 + P_{74}Z_4 + P_{72}Z_2 + P_{76}Z_6 + P_{71}Z_1 + P_{73}Z_3 + e_7$
$Z_8 = P_{86}Z_6 + P_{85}Z_5 + P_{83}Z_3 + P_{81}Z_1 + P_{82}Z_2 + P_{84}Z_4 + e_8$

Path decomposition for path model (path equations)
Figure 2 – Path model (organizational outcomes of leadership style and type of organizational culture)

$r_{35} = P_{53}$	$r_{15} = r_{13}P_{53}$	$r_{37} = P_{53}p_{57} + P_{63}P_{76} + P_{73}$	$r_{17} = P_{71} + r_{13}p_{53}p_{75} + r_{13}P_{63}P_{76} + r_{13}P_{73}$
$r_{46} = P_{64}$	$r_{16} = r_{13}P_{63}$	$r_{38} = P_{53}P_{85} + P_{63}P_{86} + P_{83}$	$r_{18} = P_{81} + r_{13}P_{53}P_{85} + r_{13}P_{63}P_{86} + r_{13}p_{83}$
$r_{45} = P_{54}$	$r_{26} = r_{24}P_{64}$	$r_{48} = P_{64}p_{86} + P_{54}P_{85} + P_{84}$	$r_{28} = P_{82} + r_{24}P_{64}P_{86} + r_{24}P_{54}P_{85} + r_{24}p_{84}$
$r_{36} = P_{63}$	$r_{25} = r_{24}P_{54}$	$r_{47} = P_{64}P_{76} + P_{54}P_{75} + P_{74}$	$r_{27} = P_{72} + r_{24}P_{64}P_{76} + r_{24}P_{54}P_{75} + r_{24}P_{74}$
$r_{57} = P_{75}$			
$r_{58} = P_{85}$			
$r_{68} = P_{86}$			
$r_{67} = P_{76}$			

Path decomposition for reconstructed path model (path equations)
Figure 3 – Reconstructed path model (organizational outcomes of leadership and type of organizational culture)

$r_{57} = P_{75}$	$r_{48} = P_{84}$	$r_{17} = r_{17} + r_{13}P_{37}$
$r_{58} = P_{85}$	$r_{47} = P_{74}$	$r_{18} = r_{18} + r_{13}P_{38}$
$r_{68} = P_{86}$	$r_{13} = P_{31}$	$r_{27} = r_{28} + r_{24}P_{47}$
$r_{67} = P_{76}$	$r_{24} = P_{42}$	$r_{28} = r_{28} + r_{24}P_{48}$
$r_{37} = P_{73}$		
$r_{38} = P_{83}$		

Table 36
Observed and Reproduced Path Correlations for the Path Model (Figure 2) and Reconstructed Path Model (Figure 3)

Observed correlations (path model)

Variables	Z1	Z3	Z2	Z4	Z5	Z6	Z7	Z8
Z1	1.000							
Z3	.451	1.000						
Z2	---	**---**	1.000					
Z4	---	---	.340	1.000				
Z5	.049	.987	-.135	-.206	1.000			
Z6	.201	-.273	-.029	-.104	-.095	1.000		
Z7	.782	.793	.138	-.562	.728	-.360	1.000	
Z8	.825	.647	.152	-.443	.726	-.590	---	1.000

Reproduced correlations (path model) -- path β coefficient

Variables	Z1	Z3	Z2	Z4	Z5	Z6	Z7	Z8
Z1	1.000							
Z3	.446	1.000						
Z2	---	**---**	1.000					
Z4	---	---	.298	1.000				
Z5	.038**	.187**	-.039**	.192**	1.000			
Z6	.154**	.255**	-.020**	.068**	---	1.000		
Z7	1.036*	.570*	.084*	-.229*	.730	-.370	1.000	
Z8	1.044*	.466	.131	-.415	.726	-.590	---	1.000

Reproduced correlations (reconstructed path model) -- path β coefficient

Variables	Z1	Z3	Z2	Z4	Z5	Z6	Z7	Z8
Z1	1.000							
Z3	.446	1.000						
Z2	---	**---**	1.000					
Z4	---	---	.298	1.000				
Z5	---	---	---	---	1.000			
Z6	---	---	---	---	---	1.000		
Z7	.831	.575*	.512*	-.590	.782	-.370	1.000	
Z8	.844	.319*	.181	-.492	.726	-.590	.850	1.000

(*) Difference between observed and reproduced correlations greater than 0.05
(**)not significant at p < .05

Figure 3.
Reconstructed Path Model (organizational outcomes of leadership and type of organizational culture).

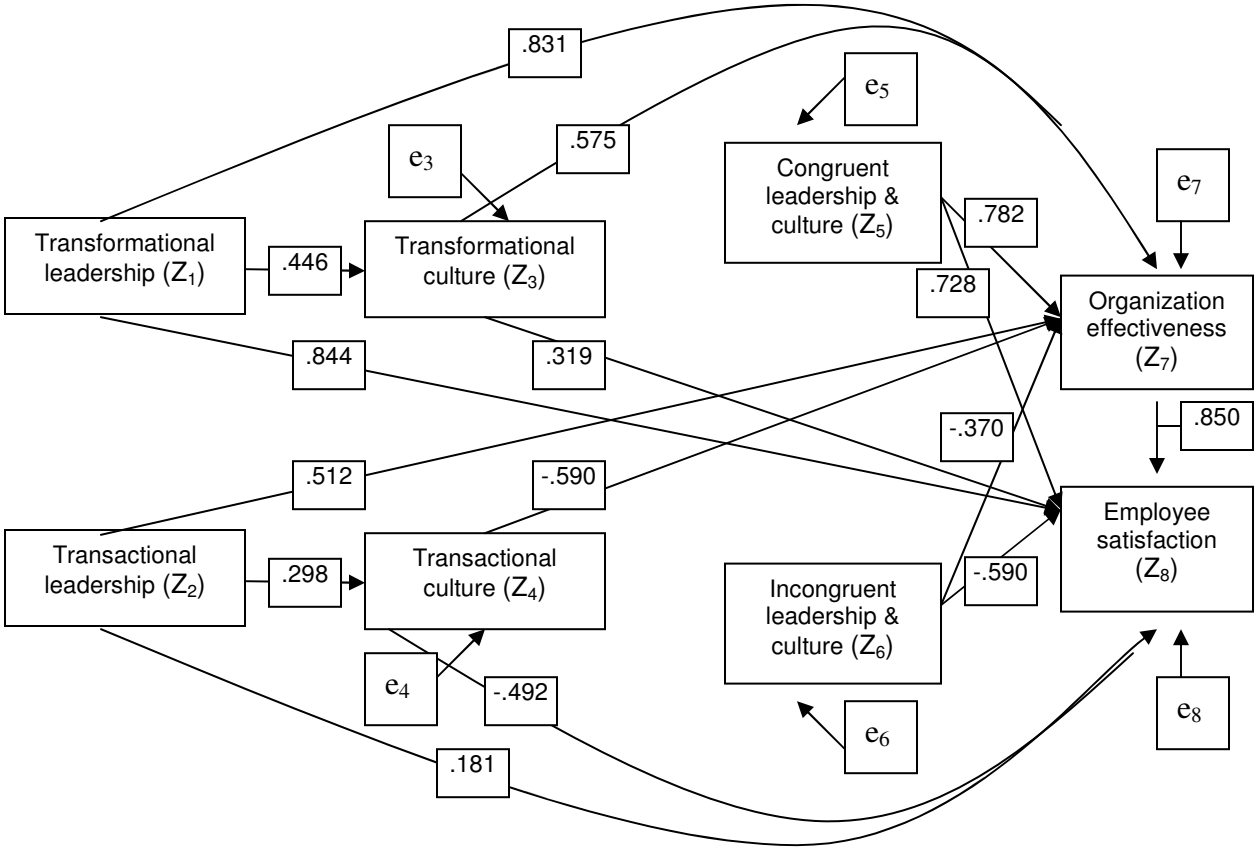


Table 37
Summary of Causal Effects for the Reconstructed Path Model (Figure 3)

Outcomes	Determinant	Causal effects		
		Direct	Indirect	Total
Path #1 – Organizational effectiveness (R^2 = .676)	Transformational leadership	.672	.159	.831
	Transformational culture	.575	---	.575
	Transactional leadership	.444	.068	.512
	Transactional culture	.229	---	.229
Path #2 – Organizational effectiveness (R^2 = .531)	Congruent LD & CLT	.782	---	.782
Path #3 – Organizational effectiveness (R^2 = .130)	Incongruent LD & CLT	-.370	---	-.370
Path #4 – Employee satisfaction (R^2 = .520)	Congruent LD & CLT	.728	---	.728
Path #5 – Employee satisfaction (R^2 = .328)	Incongruent LD & CLT	-.590	---	-.590
Path #6 – Employee satisfaction (R^2 = .697)	Transformational leadership	.789	,055	.844
	Transformational culture	.319	---	.319
	Transactional leadership	.312	-.131	.181
	Transactional culture	-.492	---	-.492

Structural equation modeling

Structural equation modeling ('SEM') provided a mechanism to determine the goodness-to-fit analysis for the path model and the reconstructed path model (Anderson & Gerbing, 1988; Bentler & Bonett, 1980). The test determined if the variances in the data and the model were consistent. LISREL 8.8 for Windows calculated the goodness to fit using chi-square and root means square residual (RMR). The result of 'good fit' represents that the reconstructed path is accepted or rejected, however other alternative models may exist (Garson, 2006c). The model chi-square should not be significant if a good fit is calculated. The lack of significance, in this test, indicates that the observed covariance matrix is significantly different from the model's covariance structure (Garson, 2006c). Garson (2006c) further notes that a $p<.05$ indicates that the model is rejected. As the RMR value, approaches zero (0) the better the fit of the model (Browne & Cudeck, 1992; Garson, 2006c).

The analysis of the path model (Figure 2) goodness to fit was significant for chi-square $X^2_{(10)} = 103.22$ $p< .001$, and RMR was 3.74. This finding indicated that the path model (Figure 2) was a 'bad-fit' and rejected. The reconstructed path model represents two distinct models within one theoretical framework. The first model related leadership styles and types of culture to organizational outcomes, while the second related congruency to organizational outcomes. The reconstructed path model (Figure 3) resulted in a chi-squares of $X^2_{(3)} = 1.19$ $p= 0.755$, RMR = 0.001 and a chi-square of $X^2_{(1)} = .36$ $p= 0.549$, RMR = 0.01 respectively. The reconstructed model was not significant and accepted as 'good-fit.' The goodness to fit analysis supported the development of the reconstructed path model (Figure 3).

LISREL 8.8 for Windows did generate path models, which were representative of the two independent reconstructed path models. The model coefficients developed by LISREL were slightly different than that produced by the structural equation models. Table 38 presents the coefficient differences between the observed and latent variables.

Table 38
Coefficient Differences Between the LISREL Generated Model and The Reconstructed Path Structural Equation Model.

Outcomes	Determinant	Coefficients	
		LISREL coefficient	Structural equation model coefficient
Path #1 – Organizational effectiveness	Transformational leadership	.85	.831
	Transformational culture	.54	.575
	Transactional leadership	.71	.512
	Transactional culture	.12	.229
Path #2 – Organizational effectiveness	Congruent LD & CLT	.72	.782
Path #3 – Organizational effectiveness	Incongruent LD & CLT	-.51	-.370
Path #4 – Employee satisfaction	Congruent LD & CLT	.81	.728
Path #5 – Employee satisfaction	Incongruent LD & CLT	-.64	-.590
Path #6 – Employee satisfaction	Transformational leadership	.89	.844
	Transformational culture	.54	.319
	Transactional leadership	.06	.181
	Transactional culture	-.50	-.492

There are differences between the coefficients generated by LISREL 8.8 for Windows and the structural equation approach however there are also similarities and a consistent relationship between the groups. In addition, the two reconstructed path models, as noted above, provided validity to the causal relationships developed from the path analysis and structural equation model approach. The results of the structural equation modeling did not suggest any changes to the reconstructed path model.

Summary

The objective of this research was to determine the relationship between hospital leadership styles, organizational cultural types, and organizational outcomes. Demographic data of the 107 participants were presented and were analyzed using descriptive and inferential statistics.

The analysis indicated that the survey tools were reliable and fulfilled their intended purpose by forming three output factors. The resulting factors consisted of (a) idealized influence (attributed), individualized consideration, intellectual stimulation, idealized influence (behavior), inspirational motivation, and contingent rewards as one factor; (b) management-by-exception active and passive as the second factor; and (c) laissez-faire as the final factor.

Analysis of the data showed a relationship between the independent and dependent variables. The data supported the hypotheses that transformational leadership style and types of organizational culture predicted and influence the organizational outcomes. Transactional leadership style and type of culture also predicted the organizational outcomes. However, transactional leadership style did not significantly increase organizational cultures, whereas transactional types of cultures did influence the outcomes.

The data indicated that congruency positively correlated with outcomes, whereas incongruency negatively correlated with organizational outcomes. Congruency had a positive effect on outcomes, and incongruency did not have a significant effect on the organizational outcomes. Testing did find that incongruency did not influence employee satisfaction and organizational effectiveness when examined together.

The causative relationship between the variables, as outlined in the path analysis, did not support a direct relationship between leadership style, type of organizational culture, and congruency. A direct relationship between congruency, leadership, and culture should be present as congruency was a direct byproduct of the leadership and cultural scores. Otherwise, the path analysis further supported the hypotheses and the theoretical conceptual model (Figure 1).

This chapter presented the findings and data analysis with supported the conceptual model, which was based on the work of Bass and Avolio (1993). The conceptual model related a full spectrum of leadership styles and types of organizational cultures leading to improved organizational outcomes, including organizational effectiveness and employee satisfaction. Table 39 summarizes the analysis for each hypothesis.

Chapter 5 provides further analysis of the results, discussion, recommendations, limitations, and implications for future research. This study will provide insight for hospital leaders in understanding the impact of the relationship between leadership styles and cultures on organizational outcomes.

Table 39
Summary of Data Analysis

Hypotheses	Summary of analysis
H1. Transformational leadership style will result in a transformational type of organizational culture.	Hypothesis accepted as regression indicated independent variables were predictive of dependent variable
H2. Transactional leadership style will result in a transactional type of organizational culture.	Hypothesis accepted as regression indicated independent variables were predictive of dependent variable
H3. Transformational leadership will result in high organizational outcomes (employee satisfaction and organizational effectiveness). H4. A transformational type of organizational culture will result in high organizational outcomes (employee satisfaction and organizational effectiveness).	a. Regression indicated independent variables were predictive of both dependent variables b. Hypothesis accepted for both organizational outcomes (effectiveness and satisfaction) when examined together.
H5. Transactional leadership will result in low organizational outcomes (employee satisfaction and organizational effectiveness).	a. Regression indicated independent variable was predictive of both dependent variables. b. Hypothesis was not accepted when the dependent variables were examined together.
H6. A transactional type of organizational culture will result in low organizational outcomes (employee satisfaction and organizational effectiveness).	a. Regression indicated independent variable was predictive of both dependent variables. b. Hypothesis was accepted when the dependent variables were examined together.
H7. A congruous relationship between leadership style and type of organizational culture will result in high organizational outcomes (employee satisfaction and organizational effectiveness).	a. Hypothesis was accepted when the dependent variables were examined together. b. Regression indicated independent variables were predictive of both dependent variables. c. Pearson correlation (r = .728 to .726)
H8. An incongruous relationship between leadership style and type of organizational culture will result in low organizational outcomes (employee satisfaction and organizational effectiveness).	a. Hypothesis was not accepted when the dependent variables were examined together. b. Regression indicated independent variables were predictive of both dependent variables. c. Pearson correlation (r = -.360 to -.590)
Theoretical Model	Path analysis established the development of a reconstructed path model (Figure 3). Structural equation modeling supported causal relationships outlined in the model.

CHAPTER 5: DISCUSSION AND IMPLICATIONS OF THE RESEARCH

This dissertation has studied the influence of leadership styles and types of organizational cultures on organizational outcomes in acute care hospitals. The preceding chapters presented the introduction, described a theoretical conceptual model, and reviewed the supporting research literature. The methodology chapter outlined the research design, measurement instruments, data collection, and methods of analysis. The data analysis chapter presented the analytical results of the survey tools, the hypotheses, and path analysis. This chapter provides a discussion of the results and limitations of the study, and makes recommendations for further research.

Summary of Findings

Descriptive analysis

The demographic analysis revealed that most respondents were females between the ages of 40 and 50. This demographic is representative of the broader healthcare environment (Jeffe & Mutha et al., 1997; United States Department of Health and Human Services, 2002; Wiggins, 2004). The majority of respondents worked as supervisors (25%), and in clinical (26%) and non-clinical (25%) staff positions, indicating an equal distribution among the workforce. In addition, most respondents had been in their current jobs more than 5 years (64.1%), and had worked for their hospital an average of 11.77 years. While these numbers indicate that all respondents met the minimal criteria for participation, their tenure indicated that they were well entrenched in their organization's culture and understood its leadership styles (Martins & Terblanche, 2003).

Organizationally, the respondents were representative of eight acute care hospitals. The mean number of beds reported was 567 and ranged from 88 to 1368. The mean number of beds nationally and in the mid-Atlantic Region is 250, ranging from 6 to more than 500 (AHA, 2006). Thus, the number of beds reported by the individual hospitals was higher than the regional or national average. The range in reported bed numbers was within expected limits (AHA, 2006). In addition, the national and regional average for hospitals reporting they belong to a healthcare system is 60% (AHA, 2006). In this study, 50% of the reporting hospitals were part of a larger healthcare system. The respondents and hospitals were generally representative of the industry and so are generalizable to the greater hospital community.

A series of correlation analyses were performed to asses the relationship between leadership styles and types of organizational cultures. The first analysis demonstrated that the transformational leadership style correlated with a transformational organizational culture. Corrigan et al. (2002) found a similar weak correlation between transformational leadership and transformational type of culture. They reported an $r= 0.49$ $p< .001$ as compared with the findings from this study of an $r=0.45$. Block (2003) found that transformational leadership correlated with Dennison's (2000) four cultural constructs at a range between $r=0.49$ to 0.53. Chen (2004) reported that transformational leadership correlated with the Organizational Culture Index with its three cultural constructs at a range of $r= 0.21$ to 0.58. Another researcher found correlation coefficients that ranged between -0.37 to 0.44 between transformational leadership and the four Organizational Culture Inventories (Waldner, 1990). While the

Waldner, Dennison, and Chen findings used different cultural constructs, they represent similarities in leadership and cultural correlations reported in this study.

The second correlation was significant between transactional leadership style and type of organizational culture. Corrigan et al. (2002) also found similar weak correlations between transactional leadership and type of culture. They reported a correlation of r=0.29 p<.001 compared with the findings from this study of r=0.34. Block (2003) found that transactional leadership correlated with Dennison's (2000) four cultural constructs at a range of r=0.21 to 0.28. Chen (2004) reported that transactional leadership correlated with the Organizational Culture Index (Wallach, 1983) with its three cultural constructs at a range of r= 0.1o to 0.21. Another researcher found correlation coefficients ranging from r= -0.47 to -0.22, between transactional leadership and four cultural constructs (Waldner, 1990). While the Waldner, Dennison, and Chen findings used different cultural constructs, they represent similarities in correlations with those reported from this study.

Correlations on transformational as well as transactional leadership style and types organizational culture on organizational outcomes were preformed. Chen (2004) found that transformational leadership style correlated with employee satisfaction. Chen (2004) also reported lower correlations, r= 0.512 compared to the results of this study which were r=0.765. Amburgey (2005) noted that transformational leadership weakly correlated with employee satisfaction, r= 0.367. Bnerji and Krishnan (2000) findings support the correlations found in this study. The correlations in their study were r=0.64 for effectiveness and r=0.71 for satisfaction, compared favorably to the findings from this study of r= 0.76 to r=0.83. In addition, Chen (2004) reported that transactional

leadership correlated weakly with employee satisfaction. Chen reported similar correlation scores r=0.192 compared to the results of this sudy, which reported an r=0.152. Amburgey (2005) also noted that transactional leadership was also weakly correlated with employee satisfaction, r=0.307.

The following section discusses the results of the factor analysis, followed by an analysis of the individual hypotheses. The chapter continues with a discussion of the path analysis, contributions, study limitations, considerations for future research, and conclusion.

Factor analysis

Factor analysis of the MLQ (Form 5X) identified three factors consisting of transformational, transactional, and non-leadership styles. The transformational leadership style included idealized influence (attributed and behavioral), individualized consideration, intellectual stimulation, inspirational motivation, and contingent rewards, while the transactional style included management-by-exception both active and passive. The final factor consisted only of laissez-faire. The construct validity of the MLQ (Form 5X) mirrored that of other published studies (Avolio & Bass, 2004; Bass & Avolio, 1994; Corrigan, Diwan, Campion, & Rahid, 2002; Den Hartog, Muijen, & Koopman, 1997; Goodwin, Wofford, & Whittington, 2001; Vandenberghe, Stordeur, & D'hoore, 2002). Still other studies have identified other factor combinations (Bycio, Hackett, & Allen, 1995; Carless, 1998; Kent, Crotts, & Azziz, 2001). None of the respondents in this study reported a dominant laissez-faire leadership style, also supporting the theoretical model in which transactional and transformational leadership

styles stand at opposite ends of the leadership continuum (Burns 1978; Bycio et al., 1995; Judge & Piccolo, 2004; Waldman, Bass, & Yammarino, 1990).

The scales used in the MLQ (Form 5X) (Avolio et al., 1995) have been found to be reliable and valid (Antonakis, 2003; Bass & Avolio, 1995, 1997; Bass, Avolio, Jung, & Benson, 2003; Bycio et al., 1995; Comrey & Lee, 1992; Hartog, Muijen & Koopman, 1996; Hater & Bass, 1988; Howell & Hall-Marenda, 1999; Lowe et al., 1996; Yammarino & Bass, 1990). Bass and Avolio (1995) based their assessment of reliability on a review of nine empirical studies that used the MLQ (Form 5X). According to the literature, the MLQ (Form 5X) has a high reliability as measured by Cronbach's alpha, which for each factor ranges from 0.67 to 0.93 (Jones, 1995). Lee (2005) found that for individual item statements, reliability between the transformational and transactional leadership scales and outcome behaviors ranges from .74 to .83. In assessing, the validity and the reliability of the MLQ (Form 5X), these authors also found that it represents the full range of leadership factors. Another study found the Cronbach's alpha range to be .81 to .93 (Banerji & Krishnan, 2000). In addition, Chen (2004) reported Cronbach's alpha range from .58 to .89. The Cronbach's alpha for this study ranged from .74 to .91, similar to the findings noted above.

Parry and Proctor-Thomas (2001) tested the ODQ scale for validity and reliability, and concluded that the transformational construct of the ODQ is reliable and valid, while the transactional construct is reliable and valid when examined as one extreme element. Specifically, Parry and Proctor-Thomas found that the ODQ was reliable for measuring and categorizing transformational and transactional elements. ODQ measurement scales were found to be reliable, with a Cronbach's alpha of 0.88 for the

transformational and 0.74 for transactional constructs (Parry & Proctor-Thomas, 2003). Their findings support the premise that the transformational/transactional scoring values represented by the ODQ scale are valid. But the ODQ factor analysis for this study produced only one factor for transformational culture, with an eigenvalue of 1.63. The Cronbach's alpha for the ODQ (cultural scale) was 0.69, which is moderately significant and slightly lower than that found by Parry and Proctor-Thomas. A bivariate Pearson's correlation coefficient between the transformational and transactional culture scales was significant at $p < .001$ with $r = -.634$. The results of this correlation are consistent with the $r = -.612$ reported by Bass and Avolio (1992).

Thus, the two survey tools have been determined to be valid. This study replicated what other researchers have found in their factor analysis of the MLQ (Form 5x). While the factor analysis for the ODQ produced only one factor, the Cronbach's alpha, and correlation coefficients were similar to other documented studies. One stated purpose of this exercise was to determine if these tools could effectively measure the leadership style and type of organizational culture in acute care hospitals; this was found to be the case.

Discussion of Results

Hypotheses testing

The first hypothesis states that a transformational leadership style will result in a transformational type of organizational culture. Although weak, the results of the regression analysis are significant in terms of predictability. Thus, the results of the data analysis support the hypothesis. These findings in turn support the research literature, which notes that a transformational leadership style is compatible and consistent with a

transformational culture (Bass & Avolio, 1993; Wofford, Whittinghan, & Goodwin, 2001). The literature further contends that numerous internal and external factors influence an organization's culture, including leadership style and level of innovation (Bennis, 1999; Chatman & Jehn, 1994; Comack et al., 1997; Fiol, Harris, & House, 1999, 1997; O'Reilly, 1989; Smith, Montagno & Kuzmenko, 2004). Prior research has supported the proposition that organizations in crisis or those affected by dynamic organizational demands favor a transformational leadership style, which in turn influences the organization's type of culture (Rajnandini, 1995; Waldesee & Simmons, 2000; Yukl & Michael, 1993).

Acute care hospitals are themselves organizations in crisis due to a number of external influences, including reduced federal funding and access to patients and resources (New Jersey Hospital Association, 2006). Of the respondents in this study, 51% and 45% identified a transformational leadership style and organizational culture, respectively. Given the organizational stress within acute care hospitals, the prevalence of transformational leadership is explainable. However, various factors may influence the adoption rate of a transformational culture. These factors include a delayed adoption, non-acceptance of cultural changes by an organization's employees, or other unidentified internal or external influences (Bennis & Nasus, 1985; Smith et al., 2004). The literature supports the assertion that organizational culture is historically molded (Hofstede et al., 1990) and deeply ingrained, and as a result is difficult to change (Atchison, 2002; Drucker, 1995; Hofstede et al., 1990; Narine & Persaud, 2003; Taylor, 2003). Hence, a change in culture may lag behind a change in leadership style, since it

takes longer for an organization to embrace a new type of culture. A longitudinal study is needed to answer this unresolved question.

The second hypothesis states that transactional leadership will result in its corresponding type of organizational culture, and this is indeed what the data analysis finds. Although weak, the results of the regression analysis are significant in terms of predictability. Thus, the results of the analysis support the hypothesis, although the outcome of the regression and correlation is weaker than that reported for the first hypothesis, where transformational leadership correlates and predicts its corresponding type of culture. The inclusion of demographic controls did influence the regression model. While not significant, the effect of demographics on all transactional regressions does require further discussion. The inclusion of the hospital as part of a health system, and years that the employee was employed by the hospital may indicate the need for these employees to be motivated by some other factor than intrinsic motivation. If the results indicated that 'current position within the hospital,' one could draw a conclusion that some set of job duties are the primary driver. Further analysis would be required to understand the underlying influences.

Extensive studies on transactional leadership (Bass, 1985; House, 1971; House, Filley, & Gujarati, 1971) indicate that a transactional leader favors and supports a stable, maintained, and structured type of organizational culture (Bass, 1985; Yukl & Michael, 1993) that offers both leader and employee organizational rules and expectations while being more bureaucratic (Bass & Avolio, 1993). This study found a high degree of both transactional leadership style and organizational culture, 49% and 55% respectively, in the hospitals under study.

According to the earlier reported literature, most healthcare organizations have a transactional leadership style, which is congruous with a transactional organizational culture (Bass, 1985; Bass & Avolio, 1993; Schwartz, 2002); no studies, however, have examined the relationship between the two in an acute care hospital. While healthcare settings have clearly been in crisis, a situation that favors a transformational style, the need to create stability, bureaucracy, rules, and regulations may in fact have necessitated the development of a strong transactional presence (Conger & Kanungo, 1987; Johnson, 1998).

The literature has correlated leadership styles with organizational types of culture (Bass, 1985). Both transformational and transactional leadership styles support their corresponding type of organizational culture. Organizations also tend to have similar cultures in relatively homogenous business units and organizational types, with similar sizes, levels of technology, and configurations (O'Reilly et al., 1991; Webster, 2004).

The third and fourth hypotheses state that a transformational leadership style and organizational culture will result in high organizational outcomes. The analysis confirms that a combination of this leadership style with organizational culture does significantly predict organizational effectiveness as well as employee satisfaction. The transformational culture has a slightly higher predictive value than does leadership style for organizational outcomes. In addition, the transformational leadership style has an overall significant effect on the two organizational outcomes combined. The transformational culture also has a similar significant effect on the combined outcomes though less than leadership style.

The inclusion of demographic control variables had not effect on the regression model. Given the fact that transactional leadership styles and cultures are affected by demographic controls those employees within a transformational environment are motivated by other factors. The employee who works within a transformational environment may be motivated by other factors not identified within the demographics such as commitment to patient care, or a professional code of ethics.

These findings in turn are supported by the research literature. The literature notes that transformational leaders are more interested in social values, are more effective during times of organizational crisis, and are more effective in promoting greater effectiveness and employee satisfaction (Avolio & Bass, 1998; Bass, 1985; Parry, 2000). Chen (2004) reported lower regression scores, R^2=0.262 compared to the results of this study which were R^2=0.616. The healthcare literature also demonstrates that transformational skills increase employee productivity and satisfaction (Bycio et al., 1995; Dubinsky et al., 1995; Morrison et al., 1997). In addition, published literature on acute care hospitals notes that organizational crisis requires leaders who are innovative and dynamic, which is synonymous with the transformational leader (Dubinsky et al., 1995).

As with leadership style, the literature on organizational cultures supports the findings of this study. Prior research has noted that a transformational organizational culture develops employee buy-in into its mission as well as organizational commitment (Bass & Avolio, 1993). This type of culture emphasizes innovation to optimize growth (Bass & Avolio, 1993; Narine & Persaud, 2003). These organizations are successful, adaptable, and effective (Bass, 1985; Gade, 2004; Narine & Pesaud, 2003). Parry and

Proctor-Thomas (2003) have suggested that the transformational culture, which emphasizes innovation and flexibility, demonstrates positive organizational outcomes. Employees within healthcare settings with a transformational organizational culture develop strong bonds and loyalty to the organization (Pettigrew et al., 1992). Overall, both the transformational leadership style and culture are predictive and have a positive effect on organizational outcomes.

The fifth and sixth hypotheses state that a transactional leadership style and organizational culture will result in low organizational outcomes. However, the analysis indicates mixed results with regard to the predictability of this leadership style and organizational culture on organizational effectiveness as well as employee satisfaction. Testing indicates that transactional leadership style does not significantly have an overall effect on organizational outcomes, whereas organizational culture does, though less so than transformational culture. These findings support prior research, which reported that transactional leadership style was weakly predictive of employee satisfaction (Chen, 2004). Chen reported lower regression scores R^2=0.04 compared to the results of this study, which reported an R^2=0.320. Overall, transactional leadership style does not have an overall influence on outcomes, while a transactional type of organizational culture does effect organizational outcomes.

As noted above, demographic control variables did influence the regression models. The inclusion of demographics such as part of a health system and current postion assumes that some job duties or commitment to an organizational mission must be effected by these variables. Further analysis on these demographics is required.

The literature notes that transactional leaders tend to focus on maintaining a stable organization and are more attentive to operating within defined constraints (Bass, 1985). It further notes a negative association between this type of leader and employee satisfaction and organizational performance (Howell & Avolio, 1993). Such a leader focuses on mistakes and defines expectations and inadequate performance (Bass et al., 2003). Healthcare employees working for transactional leaders tend to be less motivated (Medley & LaRouchelle, 1995) and less committed to their jobs (Bycio et al., 1995). According to Schwartz et al. (2002), most healthcare leaders have transactional skills. The transactional healthcare leader tends also to encourage the status quo (Dunham & Klafen, 1990).

Employees in a transactional organizational culture tend to focus on contractual relationships, have only a short-lived commitment to their work, and promote their own self-interests (Bass & Avolio, 1993; Putz, 1991). In addition, team interaction is not encouraged (Bass & Avolio, 1993). Employees working in a healthcare transactional organization may resist bureaucratic controls and innovation, and may have low job commitment (Pettigrew et al., 1992; Schwartz et al., 2002; Shaw, 2002) and organizational outcomes (Parry & Proctor-Thomas, 2000)

Thus, the literature suggests that transactional leadership should predict a lower organizational outcome score, as indeed was found in this study. Transactional leadership did not significantly influence the combined organizational outcomes. However, transactional organizational culture was significant in finding group differences in mean outcomes. This finding may result from a lack of understanding of the interrelationship between the dependent variables in a transactional leadership

environment. It might also indicate that within a transactional hospital cultural environment, the effect of stability on the employee results in greater satisfaction or better organizational outcomes**.** Underlying unidentified predictive traits of transactional leadership and type of culture needs further analysis. This analysis may assist in understanding their influence on organizational outcomes.

Hypotheses 7 and 8 predict that congruency of leadership style and type of organizational culture, as well as incongruency between the two, will have a positive or negative effect on organizational outcomes, respectively. The data analysis indicates that congruency positively correlates with organizational outcomes, while incongruency shows a negative correlation. The dependent variables of organizational outcomes, separated by congruency and incongruency, are not intercorrelated. This suggests that the congruent outcomes are higher than the incongruent outcomes.

The regression analysis supports the hypothesis in that congruency is more predictive than incongruency in determining organizational outcomes. The analysis indicates that organizational outcomes increase with congruent scores. In contrast, incongruency shows no significant effect on organizational outcomes, consisting of employee satisfaction and organizational effectiveness.

The respondents stated that their organizations were more effective and that they were more satisfied when they experienced congruency between leadership style and organizational culture. Congruency is defined as occurring when leadership style and type of culture are either both transformational or both transactional. The results indicate that although the two leadership styles and cultures are on opposite ends of their spectrums, as long as both are congruent, employees benefit.

The findings noted above also find support in the literature. Bass (1985) proposed that an individual leadership style should correlate with its corresponding type of organizational culture (Bass, 1985). Other researchers have argued that a similar relationship should exist (Hofstede et al., 1990; Kazemek, 1990a; Schein, 1992; Schwartz, Tumblikin, & Peskin, 2002; Testa, Mueller, & Thomas, 2003). Bass and Avolio (1993) postulated that a congruent relationship between leadership style and organizational culture will create an effective organization. Other researchers have posited that matching leadership styles and organizational cultures might result in operational renewal, creativity, and effectiveness (Balhazard & Cooke, 2004; Bass & Avolio, 1993; Cameron & Quinn, 1999). Similarly, other researchers have maintained that congruency influences organizational outcomes (Bass & Shackelton, 1979; Conger and Kanungo, 1987; Hartog et al., 1996; Hogan & Kaiser, 2005; Testa et al., 2003). Schein (1995) noted that incongruity between leadership styles and organizational culture negatively affects staff satisfaction and organizational effectiveness.

The research on both transformational and transactional leadership supports the proposition that although they differ in approach, if executed properly they are both effective in producing positive outcomes (Bass, 1985). In addition, although each leadership style takes a different approach, it can influence the type of culture and improve organizational outcomes (Harris & Ogbonna, 2001).

Path analysis

The path analysis identified two independent models. The first path model (Figure 2) demonstrates a causal effect of leadership (Z_1 and Z_2) on type of organizational culture (Z_3 and Z_4) and on each organizational outcome (Z_7 and Z_8). The

second reconstructed path model (Figure 3) shows a causal effect of congruency (Z_5 and Z_6) on organizational outcomes (Z_7 and Z_8). The models should, as suggested by the conceptual model (Figure 1), be interconnected, and the connection should occur between the leadership style (Z_1 and Z_2), type of organizational culture (Z_3 and Z_4), and congruency (Z_5 and Z_6). The reconstructed path model (Figure 3) does not provide for a causal relationship between the leadership style (Z_1 and Z_2), type of organizational culture (Z_3 and Z_4), and either the congruent (Z_5) or the incongruent (Z_6) boxes.

A Pearson's correlation is significant between congruent culture and leadership styles and congruent scores, with $p < .001$ and $r = 0.917$ and 0.923, respectively. The correlation is also significant between incongruent culture and leadership styles and incongruent scores, with $p < .001$ and $r = -.808$ and -0.823, respectively. Congruency is a direct calculation or product of congruent transformational or transactional leadership scores and corresponding congruent cultural scores. Similarly, incongruency is a direct calculation or product of incongruent transformational or transactional leadership scores and corresponding incongruent cultural scores. The β coefficient used in the path analysis used raw transformational and transactional leadership and cultural scores, as opposed to transformed congruent leadership and cultural scores.

As noted earlier the results of the structural equation modeling supported the data's fit to the reconstructed path model (Figure 3). The two independent models were statistically not significant and thereby accepted as a 'good fit.' This was in contrast to the findings that the path model (Figure 2) was significant and was a 'bad fit.' This finding supported the need to create an alternative model. This path analysis supported the development of an alternative reconstructed model.

The reconstructed path model (Figure 3) acknowledges the fact that congruency is a direct by-product of leadership and cultural scores (Mertler & Vannatta, 2002). The reconstructed path model eliminated the non-significant paths between leadership, culture, and congruency. Eliminating paths is acceptable if the correlations between a path within the model and the data are inconsistent (Mertler & Vannatta, 2002). If the reproduced correlations are close ($p<.05$) the model is consistent with the empirical data, discrepancies require path model modifications (Mertler & Vannatta, 2002). As noted earlier, the reconstructed path model (Figure 3) did not provide for a causal relationship between the leadership style (Z_1 and Z_2), type of organizational culture (Z_3 and Z_4), and either the congruent (Z_5) or the incongruent (Z_6) boxes. Figure 2 did not have corresponding hypotheses to support their placement however; Bass and Avolio's (1993) conceptual model suggested their relationship. Their model suggested that leadership style and type of culture also influence organizational outcomes. Their model further implied that congruency influences organization outcomes. Bass and Avolio (1993) did not draw a direct relationship between leadership, culture, and congruency. The elimination of the paths does not distract from the reconstructed path model (Figure 3) instead, the reconstructed path model has strong theoretical and statistical support, by virtue of this analysis. The reconstructed path model serves as the developed theoretical model from the data collected. The model assumes that congruency is independent from leadership style and type of culture, which it is. The model also assumes that, examined independently, leadership style and type of organizational culture have different and varying effects on outcomes. However, since organizations have interrelationships between the variables there is an impact on organizational

outcomes regardless of the leadership style and type of culture. The impact of this theoretical model, which outlines the interrelationship of the independent variables, is an important concept for organizational leaders to embrace and manage.

Congruency scores, as noted above, results directly from both the leadership and cultural scores. Similar to the effect on leadership and type of culture, unidentified external and internal factors may influence congruency. These factors may be unmeasured demographic variables, such as size of the organization, employee tenure or position, hospital profitability or mission and vision (Campbell et al., 1978; Rajnandini, 1995; Schein, 1981; Sheridan & Vredenburgh, 1978; Smith et al., 2004). Pennington, Townsend, and Cummins (2003) noted that organizational variables are important in understanding the relationship between leadership and organizational cultures; however, leadership studies generally have not taken organizational or industry variables into account (Hunt & Dodge, 2000).

There is significant organizational literature supporting the benefits of congruency (Bass & Avolio, 1993; Block, 2003; Chen, 2004; Dennison, 2000; Hofstede et al., 1990; Schein, 1992; Schwartz et al., 2002; Testa et al., 2003). In addition, case studies have related leadership styles to organizational healthcare cultures (Lok & Crawford, 1999; Shaw, 2002; Stamm, 2003). Carrol and Edmondson (2002) suggested that strong leadership drives healthcare organizational cultures. As discussed earlier, both leadership style and type of organizational culture influence organizational outcomes.

Contributions

This research contributes to the knowledge base on leadership style and organizational culture. Although the research is limited to acute care hospitals, the

results are generalizable to the healthcare community. It also builds on existing research and practitioner literature in demonstrating the benefits and influences of both leadership style and organizational culture on outcomes.

Research contributions

This research contributes to existing knowledge on leadership and organizational culture in a number of ways. First of all, it enhances the original work of Bass and Avolio (1993) on leadership styles, types of organizational culture, and organizational outcomes. Numerous theories have been proposed concerning leadership and culture, including the transformational, transactional, innovative, and visionary styles (Bass, 1985; Bass & Avolio, 1993; House, 1995). Overall, the literature supports the results of this study, which identifies distinct leadership and cultural constructs (Avolio, Bass, & Jung, 1999; Bass, 1985; Den Hartog et al., 1996). Contingent reward is included as a transformational leadership construct, which previous research supports (Den Hartog et al., 1996; Goodwin et al., 2001; Yuki, 1994). In addition, this research also supports prior hospital literature that documented a three-factor solution leadership model including; transformational, transactional, and non-leadership (Gabbert, 2005; Janssen, 2004).

The current research furthermore contributes to the understanding of leadership style and type of culture on organizational outcomes. The hypotheses support prior research showing that leadership styles and types of organizational culture have a positive effect on organizational outcomes. This research shows that, individually, transformational leadership style and culture are more predictive of organizational outcomes than is the transactional style (Bass & Avolio, 1993; Lowe et al., 1996). While

the transformational style has an overall effect on organizational outcomes, the transactional style does not significantly increase outcomes (Howell & Avolio, 1993; Parry, 2000; Putz, 1991). The adoption of a transformational style by hospital leaders is encouraged if they seek positive changes in employee satisfaction or organizational effectiveness (Boycio et al., 1995; Carrol & Edmondson, 2002; Hall, 1998; Schwartz et al., 2002).

The research also supports Bass and Avolio's (1993) conceptual model, whereby congruency between leadership styles and types of organizational culture has a positive effect on organizational outcomes, while incongruency has a negative effect (Bass, 1985; Hofstede et al., 1990; Schein, 1996). The results strongly suggest that organizational leaders should encourage the adoption of congruent over incongruent style. It also demonstrates that both congruency and incongruency exist within individual organizations.

In addition, the development of a causative path analysis is unique in the study of leadership and type of culture in hospital research literature. The path supports the analysis and discussion above, as well as the conceptual framework developed by Bass and Avolio (1993). The development of causation also encourages the development of congruent styles of leadership and culture, which in turn help drive positive organizational outcomes.

Organizational contributions

The core of this research sought to determine the effect of leadership styles and types of organizational culture, both individually, and together as either congruent or

incongruent styles, on hospital organizational outcomes. The findings reveal that congruency positively influences outcomes, while the reverse is true for incongruency.

The findings also demonstrate that multiple styles of congruency, leadership, and types of culture exist in the individual hospitals surveyed. The challenge for hospital leaders is to understand the benefits and challenges of these various styles. Existing research supports these findings and suggests that hospital leaders need to evaluate and actively manage leadership styles and types of cultures within their organizations (Bass & Avolio, 1993; Carrol & Edmondson, 2002; Narine & Persuad, 2003). These changes can occur by adopting and promoting the individual and organizational behavioral attributes associated with the styles needed (Bass & Avolio, 2000).

It may be necessary for different leaders or supervisory staff within a hospital to develop one style over another. For example, the hospital might want an engineering manager to be more transactional and a director of nursing or chief medical officer to be more transformational. The hospital may want the engineering department to be stable, follow established rules and regulations, and maintain the status quo, while it wants the chief medical officer to promote innovation and adaptability, and create an environment where the medical staff shares in the organization's mission and vision.

The realization that multiple styles exist within a hospital organization also indicates that while leaders may adopt a transformational style, their organization may be slow to adopt a similar type of culture. The lack of any longitudinal studies supports the suggestion that leaders need to monitor their organization's culture to ensure its transformation. Any delay in cultural movement represents a challenge and a threat to optimizing organizational outcomes.

This research suggests that hospitals may need to evaluate leaders and managers at the time they are hired and during their employment for both leadership styles and type of culture. This study also suggests that we train leaders to be observant of their employee's perceptions of leadership style and organizational type of culture. In addition, hospital leaders and managers need to have the necessary skills to manage various leadership styles and cultures. These leaders and managers also need the necessary skills to produce change. This research also suggests that the acute care hospital may develop expectations for various different styles and cultures for different job responsibilities and departments. The management of various styles is an essential skill assuming the hospital embraces the concept of multiplicity of leadership styles and cultures.

Regardless of congruency, leadership styles and cultures are predictive of organizational outcomes. The findings suggest that transformational styles are more predictive of positive organizational outcomes. The findings further indicate that a leader may be motivated to adopt various styles to meet individual unit or departmental initiatives. There are instances within organizations or times within the life cycle of an organization when innovation and adaptation (transformational) may not be advantageous for meeting particular objectives. Other objectives such as stability, risk avoidance, and control (transactional) may be required. The leaders of these organizations should develop the skills necessary to assess and measure movement within styles.

Understanding leadership and culture holds the potential for the success or failure of leaders. This study has developed an improved understanding of the

influences of leadership and culture on organizational outcomes. As the work of Bass and Avolio shows, the variables of leadership and culture directly affect outcomes. An understanding of the variables is critical in developing an organizational environment that allows its employees and the organization to maximize their outcomes.

Study Limitations

Although the research finds that in most cases, leadership and culture are predictive of organizational outcomes, a causative path between leadership, culture, and congruency was not established. As explained earlier, two factors account for the lack of causation. The first is that the leadership and cultural scores directly produced the congruency score. The second is that the available data do not allow for a discussion of causation with regard to unrecognized influences. The path analysis (Figures 2 and 3) implies the presence of external influences (e). These influences might include organizational vision, mission, trust, individual leadership behaviors, industry type and tasks, growth rates, technology, presence of control systems, industry or organizational life cycle, and regulatory pressures (Bennis, 1999; Chatman & John, 1994; Comack et al., 1997; Hofstede et al., 1990; O'Reilly, 1989; Parry, 2000).

A variety of acute care hospitals participated in this study, including small community hospitals and large urban teaching facilities. Further understanding of the influences of organizational demographics and pre-determinates need further exploration, since this analysis did not account for these variables.

This study also did not analyze transformational congruency versus transactional congruency. Separate analysis of each could improve understanding of the benefits of one style over the other. The data analysis did demonstrate varying effects between

transactional and transformational styles on the combined outcomes. The same analysis and outcomes may be transferable to the congruent scores.

This study further argues that since acute care hospitals are undergoing an organizational crisis, they should develop a transformational style (Bass & Avolio, 1993). This is, however, a difficult position to support given the frequency of transactional scores in all of the facilities surveyed. A longitudinal study is necessary to determine if those employees who identified a transformational leadership style with a transactional type of culture would experience a change in perception of culture over time. Is the incongruency identified a result of a delayed response, phasing-in, or is it a stable, permanent representation of the organizational environment? Again, an understanding of this environment requires a longitudinal study of leadership styles and types of cultures.

Although the distribution of the surveys was to be random, it is possible that some unknown exclusionary selection process may have occurred, and that its effects were unrecognized. In addition, there were no controls for the diversity of the employees surveyed. The job positions posted varied, and they should be generalizable to a larger group than just acute care hospitals.

Another possible limitation may involve the employee's perception of outcomes. If the employee perceived their satisfaction, and effectiveness to be high, did they then seek a leadership style or type of culture that they thought was consistent or supportive. As such, is it possible that outcomes influenced the leadership and type of culture as opposed to the reverse? This direction of influence was not evaluated. In addition, did

the employees judge different leaders even though they were to evaluate the hospital's leader? This possibility may be another limitation of the study.

Recommendations for Future Research

This study has analyzed the effect of leadership styles and types of organizational cultures within acute care hospitals. The literature review supported the development of the hypotheses. Future research should expand upon the findings by studying intervening variables, such as organizational and individual demographics, to determine the effect of other determinants on outcomes.

The study outcomes also suggest that a longitudinal study would be helpful in understanding the life cycle of change in culture or leadership style within an organization. Future studies limited to community or urban hospital settings, or that control for levels of bureaucracy and financial and regulatory influences, might result in different outcomes (Avolio & Bass, 1999). The study also suggests that a greater understanding of the effect of differences in individual respondents would be useful for leaders in better managing, predicting, and changing styles to meet organizational objectives.

While the study tools are valid and supported by this study, other cultural or leadership factors should be determined. A comparison between other measurement tools, such as the Organizational Culture Inventory, would prove helpful (Parry & Proctor-Thomson, 2001). This might lead to a modification of the MLQ (Form 5x) or ODQ, which may be more useful in one organizational type than in another. The ODQ or MLQ (Form 5x) might be less responsive or effective in assessing healthcare professionals than people in business or clerical positions.

Tang and Sarsfield-Baldwin (1996) noted that employees who perceived confidence and trust in their immediate supervisors demonstrated high levels of employee satisfaction. Tornow and Wiley (1991) indicated that employee attitude was strongly associated with their satisfaction with the organization as well as with its organizational culture. These researchers also demonstrated that satisfaction with management strongly influenced organizational effectiveness. Block (2003) found that employee perceptions of their organizations culture related to their perception of supervisors leadership style. These findings may suggest that employee perceptions of their organization's culture and management may bias and influence their perception of their supervisor's leadership style and organizational outcomes. It may also be possible to reason, due to the findings of earlier studies, that if the employee perceives a transformational culture that the perception of transformation are transferred to how they interpret the leadership style of their supervisors. The individual perceptions of culture may therefore influence the employees understanding of congruency. The pre-determinants of employee satisfaction and organizational effectiveness and its influence on the employee's perception of culture and leadership may be important. Employee's perception of leadership, culture, and satisfaction and its influence of congruency will require further analysis.

A series of post hoc multiple regressions determined if employee perceptions of their organization's outcomes predicted leadership style and type of culture. Table 40 presents the results of the analysis. The first reversed regression suggested that both organizational outcomes predicted transformational leadership. The next three regressions excluded either employee satisfaction or organizational effectiveness.

Regression number 5 indicated that both organizational outcomes predicted congruency while satisfaction alone predicted incongruency. The pre-determinants of employee satisfaction and organizational effectiveness and its influence on the employee's perception of culture and leadership requires further research as supported by these findings.

Table 40
Reverse Multiple Regressions

Regression Models	
1. Transformational leadership – model was significant for both employee satisfaction and organizational effectiveness	R=.838, R^2=.702, R^2adj=.695, F(1, 104) = 104.6, p<.001
2. Transactional leadership – model produced was significant for employee satisfaction only, organizational effectiveness was excluded from the model	R=.257, R^2=.065, R^2adj=.055, F(1, 104)=6.3, p<.05
3. Transformational culture – excluded employee satisfaction	R=.589, R^2=.346, R^2adj=.339, F(1, 104)=46.6, p<.001
4. Transactional culture – excluded employee satisfaction	R=.552, R^2=.305, R^2adj=.297, F(1, 104)=38.56, p<.001
5. Congruent model produced employee satisfaction and organizational effectiveness	R=.750, R^2=.562, R^2adj=.548, F(1, 60)=37.9, p<.001
6. Incongruent model excluded organizational effectiveness	R=.591, R^2=.348, R^2adj=.328, F(1, 48)=17.1, p<.001

A post hoc review of the demographic data, displayed in Table 41 indicated that the clinical staff predominately reported transformational leadership and type of culture. Research literature supports this finding (Bycio et al., 1995; Dubinsky et al., 1995; Dunham & Klafeln, 1990). Non-clinical staff predominately reported transactional leadership and type of culture also supported by the literature (Carroll, 2001; Carroll & Edmondson, 2002; Schwartz et al., 2002; Scott-Cawiezell et al., 2004). Future research

should seek to understand if professional clinical staff job duties, education, or background makes this group more prone to a transformational styles, and to understand other pre-determinates of leadership and culture. If job responsibilities on the other hand, requires rigidity and structure is the employee predestined to embrace a transactional position? In addition, did the clinical vs. non-clinical staff put their own values or perceptions into the answers to the assessment tools or did the respondents only rate their leader(s). This question should require further validation and study. Understanding determinates of leadership and culture, were outside the scope of this study.

The data in Table 41 also indicates a high percentage of transactional scores for both leadership and culture in the administrative group. The question raised by this finding is, does the administrative staff within an acute care hospital see themselves as gatekeepers, monitors or what impact does an extensive regulatory environment have on their job duties. Further analysis by type of institution might be helpful, tertiary – teaching hospitals v. community hospitals.

Table 41
Transformational, Transactional and Congruency Scores by Job Classification

Job classification	Transformational / Congruent Scores	Transactional / Incongruent Scores
Administration (including department head)	47% Transformational leadership	53% transactional leadership
Administration (including department head)	47% Transformational culture	53% transactional culture
Administration (including department head)	47% Congruent	53% Incongruent
Staff - (including supervisors)	52% Transformational leadership	48% Transactional leadership
Staff - (including supervisors)	46% Transformational culture	54% Transactional culture
Staff - (including supervisors)	57% Congruent	43% Incongruent
Clinical Staff	67% Transformational leadership	33% Transactional leadership
Clinical Staff	54% transformational culture	46% transactional culture
Clinical Staff	45% Congruent	55% Incongruent
Non-clinical staff	20% Transformational leadership	80% Transactional leadership
Non-clinical staff	40% transformational culture	60% transactional culture
Non-clinical staff	53% Congruent	47% Incongruent

Further study, is suggested on the impact of the multiplicity and frequency of styles within one organization. Greater understanding if other industries are similar – as an example would a higher education institution have the same sort of split between styles, given their multiplicity of job roles, educators v. non-professional support staff. The influence or effect of job duties may be a good indicator or predictor of an adopted leadership style or type of culture, as some jobs require more discipline, accountability and some require less innovation and creativity. Further study of singular departments

within organizations should occur. This would assist in understanding if multiple styles and types of cultures exist within single departments. All of the organizations studied had multiple leadership styles, types of cultures and congruency. The ability to understand these variances, which would appear to be normal occurrences, requires further study.

As previously reported the data, in Table 42, outlines the transformational, and transactional leadership and cultural scores.

Table 42
Organizational Outcome Scores

Organizational Outcome	Score
Transformational leadership style produced an effectiveness score of	3.57
Transactional leadership style produced an effectiveness score of	2.51
Transformational leadership style produced a satisfaction score of	3.71
Transactional leadership style produced a satisfaction score of	2.36
Transformational type of culture produced an effectiveness score of	3.55
Transactional type of culture produced an effectiveness score of	2.83
Transformational type of culture produced a satisfaction score of	3.53
Transactional culture produced a satisfaction score of	2.75

This data indicates that transformational leadership and type of culture produces better outcomes. A conclusion as to what type of leadership or culture is better remains unclear. This research suggests further study on the influence of other variables. Other variables for consideration include profitability, job commitment, job retention, and other

pre-determinates such as non-profit v. for-profit, and level of care (tertiary care v. community hospital).

Conclusion

This research adds to the body of existing knowledge by showing that transformational and transactional leadership styles and types of culture are predictive of organizational outcomes. The study confirms that as acute care hospitals develop a higher emphasis on trust, innovation, and personal growth (transformational), the result is higher organizational outcomes. The study adds new empirical evidence for the existence of congruency, and shows that its effect on outcomes is evident within the acute care hospital environment. This study also provides a basis for future research, with respect to understanding the impact of external and internal intervening variables.

The results of this research are significant and beneficial if healthcare leaders recognize the power of leadership style, type of culture, and the influence of congruency on its organizational outcomes. The value of this study also suggests that their may be a multiplicity of leadership styles and types of cultures within their organization and that this may be a natural finding given the variety of job duties and departmental roles. It is incumbent upon leaders, based on these findings, to assess the internal styles within their organizations and take an active role in managing not just the financial and clinical outcomes and community benefits, but also their own leadership and cultural styles, to ensure the long-term survivability of their organization's mission and values.

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Appendix A

Multifactor Leadership Questionnaire (MLQ - Form 5X)

This questionnaire is to describe the leadership style of your organization's leaders, 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 leaders 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

1. Provides me with assistance 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

Appendix B

Organizational Description Questionnaire (ODQ)

INSTRUCTIONS *for items 1 through 28, circle "T" for a true statement, "F" for a false statement, or "?" if you are undecided or cannot say about the organization you are representing.*

In MY ORGANIZATION….

T	F	?	1. We negotiate with each other for resources.
T	F	?	2. People go out of their way for the good of the department and/or organization
T	F	?	3. Decisions are often based on precedents
T	F	?	4. There is continuous search for ways to improve operations
T	F	?	5. Rules and procedures limit discretionary behavior.

Appendix C

Survey Demographics of the Respondents

Numerical code: 0000

ACUTE CARE HOSPITAL PARTICIPATION

SURVEY DEMOGRAPHICS OF THE RESPONDENTS

PLEASE CIRCLE THE NUMBER PRECEDING YOUR RESPONSE

1. Gender: 1. Male 2. Female

2. What is your position?

   1. Upper Administration 2. Department Head
   3. Supervisor 4. Staff - clinical 5. Staff – non-clinical 6. Other: _____

3. How long have you been in your current position?

   1. Less than 1 Year 2. 1-2 years 3. 3-4 years 4. 5 or more years

4. How many years have you worked at this hospital? _____

5. How many beds does your hospital operate? _____ or Not sure? _____

6. Is your hospital independent or part of a larger health system?

   1. Independent 2. Part of a larger health system

7. How many hospitals are part of your health system? _____ N/A _____

8. Is your hospital for-profit _____ or non-profit _____?

Appendix D

Sample Letter - Request for Participation

TO: Hospital Administrator
FROM: Richard Kathrins, PT, MHA
President & CEO – Bacharach Institute for Rehabilitation
Doctoral Candidate, Touro University International
DATE:
RE: Research Participation

I have been involved in a doctoral program at Touro University International for the past four years and am currently writing my doctoral dissertation. I would like to seek your support by asking your permission to survey a sample of middle managers and employees at your hospital. My research is entitled "The Relationship of Leadership Style and Types of Organizational Cultures to Effectiveness and Employee Satisfaction in Acute Care Hospitals."

This research investigates the impact of congruent or incongruent leadership styles and organizational cultural types on certain organizational outcomes. The study is based upon the work of Bass (1985) and Bass and Avolio (1993) on both transformational and transactional leadership and organizational cultural types. This study will provide insight for hospital leaders in designing leadership styles and cultures that will result in improved employee satisfaction and organizational effectiveness.

With your permission, I would like to arrange a convenient time and date to come into your hospital and meet with 15 of your employees and middle managers. Participants will be asked, at that time, to complete a questionnaire consisting of the Multifactor Leadership Questionnaire (Bass & Avolio, 1995), the Organizational Description Questionnaire (Bass & Avolio, 1993), and a short series of demographic questions. The questionnaire can be completed in less than 30 minutes. Similar requests are being made to other acute care hospitals with the intent of locating 7 hospitals that will participate with a total of 100 participants.

Hospital and individual respondent confidentiality will be maintained throughout the survey process. Confidentiality is specifically addressed on the consent form however, the names of the individual participants or hospitals will NOT be reported. Data will be aggregated to further ensure confidentiality. Any questions or concerns at any time can be addressed to the following:

1. Richard Kathrins, PT, MHA, (Principal Investigator), 61 West Jimmie Leeds Road, Pomona, NJ, 08240, (609) 748-5460 or via email at rkathrins@tourou.edu,
2. Dr. David Hunt (Dissertation Committee Chair) at Touro University International, 5665 Plaza Drive, Third Floor, Cypress, CA 90630, (714) 226-9240 ext 2122 or dhunt@tourou.edu, or

3. Dr. Afrookhteh, Chair - Institutional Review Board. Touro University International, 5665 Plaza Drive, Third Floor, Cypress, CA 90630. (714)226-9840, extension 2004 or aafrookhteh@tourou.edu.

Please let me know if I have your permission to proceed with this questionnaire. I also need the name of a contact, who might assist me in coordinating the meeting with your staff. If you need additional information to make a decision, please contact me at your earliest convenience.

Sincerely,

Richard Kathrins
President & CEO
rkathrins@tourou.edu
Primary Researcher

Appendix E

Participant Cover Letter

Sample Participant Cover Letter

Dear Survey Participant:

I have been involved in a doctoral program at Touro University International for the past four years and have received permission from _____,CEO to conduct this survey at this hospital. I am asking for your support in completing this enclosed questionnaire.

My research is entitled, "The Relationship of Leadership Style and Types of Organizational Cultures to Effectiveness and Employee Satisfaction in Acute Care Hospitals."

The research seeks to investigate the impact of congruent or incongruent leadership styles and organizational cultural types on certain organizational outcomes. The study is based upon the work of Bass (1985) and Bass & Avolio (1993) on both transformational and transactional leadership and organizational cultural types. This study will provide insight for hospital leaders in designing leadership styles and cultures that will result in improved employee satisfaction and organizational effectiveness.

The study will be conducted at your hospital and will include employees, middle managers, and supervisors. Your responses and the complete questionnaire will not be shared with the hospital, hospital administration, or your supervisor. Participation in this study is voluntary, and there will be no negative impact if you decide not to participate or complete the questionnaire. You may withdraw from participation in the study at any time. None of the questions asked will subject you to any jeopardy or risk.

You are being asked to complete the questionnaire and return it to the primary researcher. The questionnaire will take approximately 30 minutes. **Do not include your name or any other identifying information on the actual questionnaire.** Your confidentiality will be maintained throughout the survey process. Confidentiality is specifically addressed on the consent form however, the names of the individual participants or hospitals will NOT be reported. Data will be aggregated to further ensure confidentiality. Any questions or concerns at any time can be addressed to the following:

1. Richard Kathrins, PT, MHA, (Principal Investigator), 61 West Jimmie Leeds Road, Pomona, NJ, 08240, (609) 748-5460 or via email at rkathrins@tourou.edu,
2. Dr. David Hunt (Dissertation Committee Chair) at Touro University International, 5665 Plaza Drive, Third Floor, Cypress, CA 90630, (714) 226-9240 ext 2122 or dhunt@tourou.edu, or
3. Dr. Afrookhteh, Chair - Institutional Review Board. Touro University International, 5665 Plaza Drive, Third Floor, Cypress, CA 90630. (714)226-9840, extension 2004 or aafrookhteh@tourou.edu.

I am available to answer any questions about the questionnaire or the research. Your assistance in this research will result in improving and understanding the impact of leadership styles and organizational cultures used by hospitals.

Sincerely,

Richard Kathrins
President & CEO
Bacharach Institute for Rehabilitation
rkathrins@tourou.edu
Primary Researcher

Appendix F

Questionnaire Instructions

Questionnaire Instructions

Dear Participant:

Thank you for agreeing to participate in this research on "The Relationship of Leadership Style and Types of Organizational Cultures to Effectiveness and Employee Satisfaction in Acute Care Hospitals."

Instructions:

Please read the attached Multifactor Leadership Questionnaire (MLQ - Form 5X), the Organizational Description Questionnaire (ODQ), and the Demographic Questionnaire carefully, and follow the instructions for completing each questionnaire:

1. First complete the "Consent to Participate in a Research Questionnaire" form.
2. Next complete the Demographic Questionnaire.
3. Next complete the MLQ - Form 5X and rate yourself accordingly.
4. Finally, complete the ODQ form.

After you have completed the questionnaires, you will be asked to place them in the attached envelope and drop it into the box provided. Because confidentiality is important, **DO NOT PLACE YOUR NAME OR ANY OTHER IDENTIFYING REMARKS OR INFORMATION ON THE QUESTIONNAIRE OR ENVELOPE.**

Thank you very much for your support and your time in participating in this research study – it is greatly appreciated.

Sincerely,

Richard Kathrins
rkathrins@tourou.edu
Primary Researcher

APPENDIX G

INFORMED CONSENT FORM

In-person Questionnaire

CONSENT TO PARTICIPATE IN A RESEARCH QUESTIONNAIRE

Title of the study: The relationship of Leadership Styles and Types of Organizational Cultures to the Effectiveness and Employee Satisfaction in Acute Care Hospitals.

Purpose of the Study: The purpose of the research is to determine the relationship of leadership style and type of organizational culture to outcomes in acute care hospitals. This research will provide valuable information to hospital leaders on the relationship of leadership and culture to an organization's effectiveness and employee satisfaction.

Procedure: It will take about 30 minutes to complete the survey. The following further explains some specific issues related to this research.

If you agree to participate, you will be asked to complete the questionnaire. The questionnaire will ask some background questions as well as questions about your perceptions of the hospital's leaders and the organization's culture, and about your level of satisfaction and the organization's effectiveness.

Potential Discomforts and Risks: There are no foreseeable risks in participating in this questionnaire or in this research.

Potential Benefits: There are no direct benefits to you for participating in this study. However, your participation will help to further the understanding of the impact of leadership and organizational culture on your organization.

Payment for Participation: There will be no cost to you or compensation for participation in this study.

Confidentiality: Your confidentiality will be protected to the highest degree possible. All data will be accessed only by the principal researcher on a secure database that will anonymously organize participant responses. Your individual responses, names or the names of the individual hospitals will not be shared with your hospital or in the final report.

Participating subjects will be assigned a four-digit coded number. The number will be placed on the front of the questionnaire by the primary researcher, which will identify the hospital where the survey was completed. Reporting of aggregate data and the use of numerical coding system for the individual questionnaires will

maintain the confidentiality of the participants. The numerical coding will identify individual hospitals but not individual participants. The study will not report individual participants or hospital names. The actual surveys and related data will be collected, maintained, and stored for a minimum of 5 years by the primary researcher in a secure, locked office.

Right to Refuse to Participate: You have the right to refuse to participate or discontinue participation in this study at any time without penalty. You may end your participation by not completing or returning questionnaire.

This study has been reviewed and approved by the Institutional Review Committees of Touro University International.

Questions or Comments about this Research Study: If you have any questions or concerns about the research, please feel free to contact:

1. Richard Kathrins, PT, MHA, (Principal Investigator), 61 West Jimmie Leeds Road, Pomona, NJ, 08240, (609) 748-5460 or via email at rkathrins@tourou.edu,
2. Dr. David Hunt (Dissertation Committee Chair) at Touro University International, 5665 Plaza Drive, Third Floor, Cypress, CA 90630, (714) 226-9240 ext 2122 or dhunt@tourou.edu, or
3. Dr. Afrookhteh, Chair - Institutional Review Board. Touro University International, 5665 Plaza Drive, Third Floor, Cypress, CA 90630. (714)226-9840, extension 2004 or aafrookhteh@tourou.edu.

Rights of Research Subjects: You have the right to not participate and as a result their will be no associated penalties. If you have any questions regarding your rights as a study participant you may contact the Institutional Review Board of the Protection of Human Subjects at Touro University International, 5665 Plaza Drive, 3rd Floor, Cypress, California, 90630, Telephone (714) 226-9840 or send an email to aafrookhteh@tourou.edu

Consent of Research Participant: By signing your name to the line below indicates that you have read, understand and agree to participate in this research survey, and that you have been given a copy of this form.

_____ _____

SIGNATURE DATE

APPENDIX H

INSTITUTIONAL

REVIEW BOARD APPROVAL

Touro University International
Institutional Review Board for the Protection of Human Subjects

IRB REVIEW FORM

PROJECT TITLE:	PROJECT INVESTIGATOR	PROJECT DATE:
The Relationship of Leadership Styles …	Richard Kathrins	May 2006

APPLICATION TYPE: ☐ EXEMPT **X☐ EXPEDITED REVIEW** ☐ FULL REVIEW

APPLICATION STATUS: ☐ APPROVED **X☐ APPROVED WITH AMENDMENT**

☐REQUIRES ADDITIONAL INFORMATION ☐ NOT APPROVED

THE FOLLOWING ADDITIONAL INFORMATION/AMENDMENT IS REQUIRED BY THE IRB:

1. Submit hospital approval to administer survey before collecting data;

2. Provide a more comprehensive statement on confidentiality and how the data will be protected on the Participant Cover Letter as well as the consent Form;

3. Add Dissertation chair and IRB chair contact information on all documents;

4. Add signature lines on the Consent Form.

Afshin Afrookhteh 05/08/06

IRB Chair Date

APPENDIX I

TESTS FOR HOMOSCEDASTICITY

SCATTERPLOTS

"Regression Standardized Residual

vs.

Regression Standardized Predicted Value