THE RELATIONSHIP BETWEEN HOSPITAL PERFORMANCE AND CEO COMMITMENT

A DISSERTATION

PRESENTED TO THE FACULTY OF

CALIFORNIA SCHOOL OF PROFESSIONAL PSYCHOLOGY

In Partial Fulfillment

of the Requirements for the Degree of

DOCTOR OF PHILOSOPHY

By

Helenmarie Carlson

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DEDICATION

To my vivid, lyrical, and courageous Mother, Eleanor Bertha Jacobson Carlson, 1921-1994 who personified light, love, hope and delight, and who taught me to wonder, to pray, to imagine, to look up, and to listen between the notes to hear the real music.

and

To my Father, Paul Arnold Carlson 1920-2000, who introduced me to the view from the mountaintop and who taught me what it is to be faithful.

Acknowledgement

The image of a graduate student working as a solitary individual is simply an illusion. Staying on the slippery path to completion would have been impossible without the sustaining confidence and support of friends and family. For me there are many, and their contributions are both legion and precious. I thank you all for demonstrating that love is an action verb.

Special Thanks to Joy Diffendal, for unwavering confidence, daily encouragement and support, Jan Kapchiske-Seidensticker for the gift of marbles when certain I had lost mine, and Liz Walton, for reminding me to focus on the goal rather than the process. Thank you Marjorie Flitterman for sharing your wisdom, for reminding me to laugh loud and often, and that believing is seeing. Thank you Dr. Dorothy Bray, Sheila Grattan, Geoff and Kay Lang for your validation when the path became dark and daunting. Thanks also to Bobbie Gilroy for reminding me that the only way out is through, Susie and Michael Ostanik, my brother Frank who returned me to myself. Thank you to all of the Hospital CEOs who generously contributed their time.

Thank you to my extraordinary faculty committee, Jean Greaves, Nancy Johnson, Delbert Nebeker, for thoughtful comments, suggestions, guidance and direction.

Finally, Thank you, Dr. Sorenson, for your ever patient and most gracious encouragement and for helping me realize this goal one step at a time.

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CHAPTER I

Introduction

Do top performing organizations have more committed leaders than organizations that are not top performers? What is the relationship between an organization's performance and the organizational or occupational commitment of the Chief Executive Officer of the organization?

This study explores the relationship between the overall performance of acute care hospitals operating in the United States and the occupational and organizational commitment of the Chief Executive Officers (CEOs). The focus is the nexus of organizational performance with the organizational and occupational attachment of the CEO.

Implicit in the extant commitment research are the assumptions that the behavior of committed employees is positive and that committed individuals will be more willing to work toward organizational objectives and promote the work of the organization than those who are not committed to the organization. Commitment has been described as both a state of positive obligation to an organization and a state of obligation developed as a by-product of past actions (R.B. Brown, 1996). It has been proposed that organizations whose members have higher levels of occupational or organizational commitment will show higher performance and productivity (Arnold, 1990; Cohen, 1993; Cohen & Hudecek, 1993; Colarelli & Bishop, 1990; Coleman, Irving, & Cooper, 1999;

Gaertner & Nollen, 1989; Jaros, 1997; Ko, Price & Mueller, 1997; Rousseau & Wade-Bensoni, 1995, Sheldon, 1971; Weiner & Vardi, 1980; Whitener & Waltz, 1993).

Researchers have suggested that the employees who are strongly committed are more likely to set a higher standard of performance quality and to extend more effort to achieve this higher standard than those with weak commitment (Cohen, Fink, Gadon, & Willits, 1988; Lee, Carswell, & Allen, 2000; Leonard, Buarvais, & Scholl 1999; Meyer, Bobocel, & Allen, 1991; Ostroff, 1992; Shore & Wayne, 1993; Testa, 2001; Vandenberg & Scarpello, 1994; Wallace, 1995). However, relatively limited research has focused on commitment as a factor which influences overall organizational performance (Kanungo, 1982; Keller, 1997; Oliver, 1990; Ostroff, 1992; Randall, 1990; Schneider, 1996).

The scope of influence that a Chief Executive Officer (CEO) has over an organization is controversial in the literature (Chemers, 2000; Daily & Johnson, 1997; Finkelstein & Hambrick, 1996; Hogan, 1994; Hollander, 1995; Meindl, Ehrlich, & Dukerich, 1985; Norburn, 1989; Rauch & Behling, 1984; Yukl, 1989). Researchers do not universally agree that leadership is a critical factor in an organization's performance. However, CEO influence has been linked to the strategic direction, structure, culture and internal processes of the organization (Hart & Quinn, 1993; Podsakoff , MacKenzie, & Bommer, 1996; Venkatraman & Ramanujam, 1986; Vroom & Yetton, 1973; Yukl, 1998).

While the literature reveals disagreement about the scope of influence that a CEO wields, there is consensus in the literature that the study and assessment of leadership should include overall organizational performance indicators (Chemers, 2000; Finkelstein & Hambrick, 1996; Hart & Quinn, 1993; Hogan, Murphy, & Hogan, 1994; Hollander, 1995; Rauch & Behling, 1984; Venkatraman & Ramanujam, 1986). Hogan (1994) wrote,

> The proper way to study leadership is to compare the characteristics of persons in charge of successful groups with persons in charge of comparable groups that are less successful....There are problems associated with doing this kind of research but it is the only research that gets at the heart of the leadership problem. (p. 3)

The relationship between leadership commitment and organizational performance is unclear. This study is exploratory and seeks to determine if a relationship between organizational performance and Organizational or Occupational commitment of the CEO can be found.

Overview

The topic of commitment has been approached from a number of perspectives and has resulted in a somewhat confusing and sometimes contradictory array of definitions, categories and conceptualizations (Brown, 1996; Hulin, 1991; Huselid & Day, 1991; Kanter, 1968; Meyer & Allen, 1997; Meyer, Paunonen, Gellatly, Goffin, & Jackson, 1989; Morrow, 1993; Oliver, 1990; Podsakoff, MacKenzie, & Bonner, 1996; Reichers, 1985; Salancik & Pfeffer, 1977; Sass & Canary, 1991). The most cited definition of organizational commitment was initially proposed by Porter, Steers, Mowday, and Boulian (1974),

> Organizational commitment is the relative strength of an individual's identification with and involvement in a particular organization ... a person's belief in and acceptance of the organization's goals and values, a willingness to exert effort on behalf of the organization and a desire to maintain membership within the organization. (p. 26)

Porter et al. (1974) introduced the Organizational Commitment Questionnaire (OCQ) to measure commitment. Since its introduction, the OCQ has become one of the most widely used measures in studies of organizational commitment (Benkhoff, 1997; Mathieu & Zajac, 1990; Meyer & Allen, 1997).

Most of the conceptualizations and definitions of commitment can be described as having either a behavioral or attitudinal focus. Meyer and Allen (1997) summarized the differences,

> Attitudinal commitment focuses on the process by which people come to think about their relationship with the organization. In many ways it can be thought of as a mind set in which individuals consider the extent to which their own values and goals are congruent with those of the organization. Behavioral commitment, on the other hand, relates to the process by which individuals become locked into a certain organization and how they deal with this problem. (p. 9)

Oliver (1990) explained the behavioral approach to commitment as largely concerned with the process by which individuals come to develop a sense of commitment to their own actions.

The classifications of commitment generally reflect three broad themes: commitment as an affective, or emotional orientation toward the organization, commitment as a function of an individual's recognition of the costs associated with leaving the organization, and commitment as a duty or moral obligation to remain with the organization

In addition to organizational commitment, other types of commitment have been explored including commitment to occupations and careers (Blau, 1985, 1988; Colarelli &

Bishop, 1990 Meyer, Allen, & Smith, 1993), to professions (Morrow & Wirth, 1989), to jobs and tasks (Koslowsky, 1990), to unions (Fullagar & Barling, 1989), to supervisors (Becker, 1992; Becker, Billings, Eveleth, & Gilbert, 1996; Ellemers, Spears, & Doosje, 1997; Ellemers, Wilke, & van Knippenberg, 1993) and to nested work units (Lawler, 1992; Mueller & Lawler, 1999).

Commitment has been linked to individual differences. For example, Luthans, Baack, and Taylor (1987) reported an association between commitment and an individual's locus of control. Locus of control refers to a person's beliefs about whether the outcomes of his or her actions are perceived to be dependent on what he or she does or if the outcomes are believed to be determined by events beyond the individual's personal control. The individuals who believe they control what happens are described as having an internal locus of control. The persons who believe that what happens to them is a function of luck, fate or powerful others are described as having an external locus of control (Rotter, 1966).

Colarelli and Bishop (1990) studied managerial and professional employees and reported a positive correlation between internal locus of control, and career commitment. Lee, Carswell and Allen (2000) completed a meta-analytic review of person and work related variables and reported individuals with a more external locus of control expressed lower occupational commitment than did those with a more internal locus of control. Coleman, Irving, and Cooper (1999) reported that internal locus of control was associated with affective organizational commitment and external locus of control was associated with continuance commitment. Eby, Freeman, Rush, and Lance (1999) reported a positive association between commitment and intrinsic motivation.

The groups of individuals who have been studied to date in the commitment research have included nurses, accountants, students, CPAs, bank tellers, engineers, attorneys, bus drivers, psychiatric technicians, railroad workers, middle managers, team supervisors, scientists, teachers, technical and administrative workers. Gaertner and Nollen (1989) found that commitment was higher among employees who had been promoted. A consistently positive association has been found between an individual's commitment and individual behaviors such as attendance, and his or her expressed intention to remain with the organization and prosocial behaviors on the job such as helping others (Allen & Meyer, 1993; Keller, 1997; Mathieu & Zajac, 1990; Meyer & Allen, 1991, 1997; Tett & Meyer, 1993; Wallace, 1993; Whitener & Waltz, 1993). Researchers have consistently reported that employees who are committed to the organization, supervisor, or their work group are more likely to remain in the organization than are uncommitted employees (Becker, 1992; Becker, Billings, Eveleth & Gilbert, 1996; R.B. Brown, 1996; Cohen, 1993; Cohen & Hudecek, 1993; Jaros, 1997; Koslowsky, 1990; Lawler, 1992; Meuller & Lawler, 1999; Meyer & Allen, 1997; Randall & Cote, 1991; Shore & Wayne, 1993).

There is general consensus in the published literature that commitment is distinct from but positively related to job satisfaction, and job involvement (Lee, Carswell, & Allen, 2000; Meyer, Allen, & Smith, 1993; Munro, 2001; Randall & Cote, 1991; Tett & Meyer 1993), and that commitment psychologically binds an individual to a particular focus (e.g., the organization, the supervisor, the work unit, the occupation, income, status, benefits or some combination of those objects). The literature acknowledges that an individual may be committed to more than one focus (Allen & Meyer, 1993, 1997;

Becker, 1992; Randall, 1990; Reichers, 1985). Commitment is currently construed as a complex construct that can take different forms, have multiple foci and result in different behaviors (Becker, Billings, Eveleth, & Gilbert, 1996; Meyer & Allen, 1997; Morrow & McElroy, 1993; Wallace, 1993, 1997).

Background of the problem

Organizational Commitment research has been criticized for the inconsistent way the construct has been defined and measured over the years and for its failure to demonstrate a link to performance (Benkoff, 1997; Dutton, Dukerich, & Harquail, 1994; Meyer & Allen, 1997; Mowday, Porter, & Steers, 1982; Randall & Cote, 1991). Summarizing the confusion about the construct Hulin, (1991) wrote, "commitment seems to have been unnecessarily imprecise in both the conceptual developments and the operationalization" (p. 488).

Social Identity theory proposes that people derive much of their identity from the social groups and categories to which they belong (Hogg & Abrams, 1998; Tajfel & Turner, 1986). The individual may identify more strongly with characteristics of a group than to his or her own personal characteristics. Social identity researchers have argued against the popular working definition of commitment proposed by Porter et al. (1974) because they believe that the use of the word 'identification' obfuscates and confounds the meaning of the construct. The definition of commitment proposed by Porter et al. (1974) illustrates the possible confound.

> Commitment is the relative strength of an individual's identification with and involvement in a particular organization, and is based upon a person's belief in

> and acceptance of the organization's goals and values, a willingness to exert effort on behalf of the organization and a desire to maintain membership within the organization. (p. 26)

Dutton et al. (1994) contend that commitment and identification are distinct constructs. They explain that identification means that the object of attachment becomes self-defining. "When a person's self-concept contains the same attributes as those in the perceived organizational identity, we define this cognitive connection as organizational identification. Organizational identification is the degree to which a member defines him or herself with the same attributes that he or she believes define the organization" (p. 240).

Social psychology theories have been proposed to explain relationships at the individual and group levels. Bem (1972) wrote from the perspective of self-perception theory and proposed that individuals use the information about what they do as the basis for drawing inferences about who and what they are. The theory contends that self conceptions develop from self attributions based on the observations the individual makes of one's own behavior in both private and group settings.

Self-categorization theory research by Tajfel and Turner (1986) demonstrated that individuals have a tendency to impose a structure upon or classify their world in order to simplify and bring meaning to it. Individuals have a desire to maintain a positive self-identity and often achieve this through a process of self-categorization. Individuals who perceive themselves as being more like a particular in-group will be more likely to identify with that group (Tajfel & Turner, 1986). A member's identification with a group or organization is likely to result in a higher level of positive self-identity for the

individual, increased cohesiveness with the group and thereby result in a higher level of commitment to that group (or organization).

Pratt (1998) wrote that the researchers favoring attitudinal conceptualizations of commitment tend to see identification as being either identical with commitment or an aspect of organizational commitment. Pratt (1998) clarifies the distinction between commitment and identification by writing that the term identification conceptually construes the individual-organization relationship in terms of an individual's self-concept; organizational commitment does not. "As such the two seem to ask very different questions. Organizational commitment is often associated with 'How happy or satisfied am I with my organization?' Organizational identification, by contrast, is concerned with the question 'How do I perceive myself in relation to my organization?'" (p. 178).

Ashforth and Mael (1989) attempted to clarify the distinction between organizational commitment and organizational identification. They explain that commitment may not necessarily be organization specific because many organizations have similar values and goals. However, organizational identification *must* be organization-specific because it is the specific organization that is seen as self defining. "Identification, is the fusion of self and organization" (Ashforth, 1998, p. 268). Commitment refers to a bond between the person and the place or group but does not address how individuals define themselves in terms of the organization. Organizational commitment measures do not measure an individual's feelings of oneness with the organization. In contrast to organizational commitment, organizational identification is an identity-based theory of organizational attachment. Organizational identification occurs

when an individual's beliefs about the organization become self-referential or self-defining (Pratt, 1998). "At the most elemental level all forms of organizational identification involve a sense of the individual as a part of the larger organizational entity. I is part of We" (Rousseau, 1998, p. 219).

Caldas and Wood (1997) noted that the popular use of the term identity has roots in classical western philosophy, and seems to be as old as logic and algebra. The principle of identity means that any given thing is identical to itself, that for every X, X=X. In algebra, identity is said to exist when two expressions represent the same number. In the realm of logic, identity expresses the idea that something is one and the same thing as something else (Copi & Cohen, 1990).

The psychoanalytic notion of individual identity takes on the sense of a process located within the individual yet influenced by environment and by culture (Erikson, 1980). Ashforth and Mael (1989), Dutton et al. (1994), Rousseau (1998), and Pratt (1998) contend that identification may be a more accurate definition of the attachment between an individual and the organization than commitment and would better explain the psychological attachment between an individual and work, organization or profession. (See the Literature Review, Chapter II, for additional discussion of Identification).

The commitment research literature assumes that the organization realizes benefits of an individual's commitment. However, while an individual worker's commitment to going to work on time everyday, being a well behaved corporate citizen and remaining with an organization may contribute to reduced staffing costs, or the effectiveness of a subunit, those benefits have not been shown to translate into a benefit to the overall organization (Meyer & Allen, 1997). Most research examining the relationship between

employee commitment and performance has been disappointing in so far as a relationship has not consistently been found.

Mathieu and Zajac (1990) completed a meta-analysis of organizational commitment research findings and commented, "Although higher levels of commitment may relate to improved job performance in some situations, the present findings suggest that commitment has very little direct influence on performance in most instances" (p. 184). Explanations for a weak commitment-performance relationship have been attributed to inconsistency in both the conceptualization and measurement of the commitment construct (Keller, 1997; Ostroff, 1992; Schneider, 1996). Dutton et al. (1994) proposed that confusion in the working definition of the commitment construct could in part explain why the research that has attempted to link commitment with performance has been so disappointing.

Benkhoff (1997) proposed that previous studies investigating the link between commitment and performance were not convincing not because of the definition of the construct but because the previous studies were at the individual unit of analysis and related to outcomes of marginal importance for overall organizational success.

Previous research in occupational commitment included the study of individuals working within various occupations such as nurses (Meyer & Allen, 1997), union members (Fullagar & Barling, 1989; Gordon, Philpott, Burt, Thompson, & Spiller, 1980), accountants (Aranya & Ferris, 1983, 1984), bank tellers (Benkhoff, 1997), attorneys (Wallace, 1993), scientists and engineers (Keller, 1997), police officers (Koslowsky, 1990), university employees (Lawler, 1992), and staff and line employees (Irving, Coleman, & Cooper, 1997).

The topic of organizational identification, like organizational commitment research, has focused on the individual unit of performance or outcomes analysis. The published literature includes studies of army recruits (Mael & Ashforth, 1995), college alumni (Mael, 1988), Amway distributors (Pratt, 1998), journalists (Sass & Canary, 1991), and certified public accountants (Siegel & Sisaye, 1997). There have been no published studies which explore the relationship between organizational identification and organizational performance, studies measuring the organizational identification of CEOs, or the relationship of either the level of organizational commitment or organizational identification to overall organizational performance.

Statement of purpose

This study investigated the relationship between organizational performance and leader commitment to determine if top performing (benchmark) hospitals are led by CEOs with higher levels of either organizational commitment, occupational commitment or organizational identification than the CEOs of hospitals which are not classified as top performers. A causal relationship between performance and commitment or performance and identification was not proposed recognizing that the converse could also be likely; a publicly ranked high level of organizational performance could just as likely result in or lead to organizational commitment, occupational commitment and or organizational identification of the CEO.

In addition, this study explored the scales designed to measure organizational commitment, occupational commitment and organizational identification to determine whether the scales measured the same or different constructs.

The constructs and measures of organizational commitment have been reported to be distinct from job satisfaction, job involvement, career salience, job centrality, occupational commitment, work group attachment and turnover intention (Brooke, Russell, & Price, 1988; Brown, 1996; Cohen, 1993; Huselid & Day, 1991; Mathieu & Farr, 1991, Meyer & Allen, 1997; Meyer, Allen, & Smith, 1993; Meyer, Paunonen, Gellatly, Goffin, & Jackson, 1989; Randal & Cote, 1991; Vandenberg & Lance, 1992). However, few studies have demonstrated that organizational identification and organizational commitment are distinct constructs (Dutton et al., 1994).

Research questions

The following specific questions were addressed:

1. What is the relationship between hospital performance and the level of organizational commitment of the Chief Executive Officer (CEO)?
2. What is the relationship between hospital performance and the level of occupational commitment of the CEO?
3. What is the relationship between hospital performance and the level of organizational identification of the CEO?

Hypothesis

Hypothesis 1: The top performing (benchmark) hospitals will be led by CEOs who demonstrate a higher level of organizational commitment than those which are not top performing benchmark hospitals.

Hypothesis 2: The top performing (benchmark) hospitals will be led by CEOs who demonstrate a higher level of occupational commitment than those which are not top performing benchmarks.

Hypothesis 3: The top performing (benchmark) hospitals will have CEOs who demonstrate higher levels of Organizational Identification than those who are not classified as top benchmark performers.

Hypothesis 4: The Meyer and Allen Three Component Measures of Commitment and the Organizational Identification instrument measure different constructs.

Hypothesis 5: There is a relationship between organizational performance, the Organizational and Occupational commitment and Organizational Identification of the Chief Executive Officer of the organization.

Relevance of Topic

Much is being written about how the world of work is changing (Howard, 1995; Rousseau, 1998; Rousseau & Wade-Bensoni, 1995). The changes include increased global competition, rapid developments in information technology, reorganizations and downsizing, reengineering of business, and outsourcing. Consequently, employees are being advised to look out for themselves to ensure they are employable in the event of a layoff, merger, or other business change, or economic shift (Hirsch, 1987).

Lee et al., (2002) noted that occupations represent a meaningful focus in the lives of many people, and opined that occupational commitment is important because of its potential link to work performance. They wrote:

> Coping with the uncertainty associated with mergers, acquisitions and layoffs has caused many individuals to intensify their focus and commitment to the aspect of their working life over which they feel they have more control, their occupation...

> Researchers have demonstrated that the development of expertise necessary for consistent high-level performance requires individuals to engage regularly in relevant activities for long periods of time. Thus to the extent that it influences continued involvement commitment may be an important precursor of exemplary work performance. (p.799)

Meyer and Allen (1997) explain that organizational commitment is not an outdated construct or irrelevant domain of study, because regardless of their form or structure, organizations are not disappearing. While organizations may be becoming leaner, and organizational models may be changing they must sustain a core of people who are the organization. The persons who remain become even more important to the organization. Meyer, Allen and Topolnytsky (1998) have written that the more practical question is not whether an individual remains with or is committed to the organization, but what is accomplished while there.

Affective commitment appears to be strengthened by work experiences that contribute to employees' "comfort" in the organization as well as their sense of competence and self worth (participation, feedback; challenge). Continuance commitment increases as the individual strives to protect, continue and retain valued benefits that are linked to continued employment within the organization and within the occupation. Normative commitment is influenced by experiences or services and that create a sense of obligation for the employee to reciprocate by staying. Common to all of the themes is the tendency for the commitment to tie the individual to the organization. Employees with strong affective and normative commitment are likely to behave in ways they view as being in the organization's best interest. Those with higher levels of continuance

commitment may be motivated to do little more than what is required to sustain their employment and their benefits (Allen & Meyer, 1996). Randall (1987) warned about high levels of commitment leading to a rekindling of the organizational man syndrome and suggested that high levels of commitment may lead to less innovation and creativity. Boudreau and Berger (1985) warned that if poorer performers tend to become more committed, then increased levels of commitment could actually decrease organizational effectiveness.

The intent of this study was to determine if organizational performance could be linked to the organizational commitment, occupational commitment or organizational identification of the CEO of the organization.

Chapter II summarizes the Commitment and Organizational Identification literature. Separate sections discuss organizational commitment, occupational commitment, organizational identification, leadership and hospital performance.

Definitions of important terms

Organizational commitment. Organizational commitment has been defined in many ways. Porter et al. (1974) introduced the most referenced definition in the commitment literature while developing the Organizational Commitment Questionnaire (OCQ). They wrote "commitment occurs when individuals identify with and extend effort towards organizational goals and values" (p. 603). They elaborated by stating that "commitment consists of (a) a belief in and acceptance of organizational goals and values, (b) the willingness to exert effort towards organizational goal accomplishment, and (c) a strong desire to maintain organizational membership" (p. 604).

Building on extant research Meyer and Allen (1991) introduced an alternative comprehensive conceptualization of organizational commitment and wrote that "commitment is a psychological state that (a) characterizes the employee's relationship with the organization and (b) has implications for the decision to continue or discontinue membership in the organization" (p. 67). Meyer and Allen proposed three distinct components or themes of commitment. Affective commitment is demonstrated by individuals who remain with the organization because they *want* to. Continuance commitment is demonstrated by individuals who remain with the organization because they *need* to; and Normative commitment is demonstrated by employees who remain because they feel that they *ought* to stay. According to Meyer and Allen, employees can experience varying degrees of all three components of organizational commitment.

Occupational commitment. Professional, occupational and career commitment are terms that have been used somewhat interchangeably in the literature (Meyer, Allen, & Smith, 1993). Career commitment refers to commitment that emphasizes the importance of a profession in one's total life. Aranya, Pollock and Amernic (1981) defined the construct as the relative strength of identification with and involvement in one's profession, occupation, or career. The definition was derived from the organizational commitment definition proposed by Porter et al. (1974) but the words 'occupational commitment' were substituted for the words 'organizational commitment'.

Colarelli and Bishop (1990) defined occupational commitment as the development of personal career goals and the attachment to, identification with and involvement in those

goals. Blau (1985) defined career commitment as "one's attitude towards one's profession or vocation" (p. 280).

Meyer and Allen (1993) developed a measure of commitment that distinguishes between three components of occupational commitment: (a) affective occupational commitment, a desire to remain in the occupation; (b) normative occupational commitment, a feeling of obligation to the occupation; and (c) continuance occupational commitment, a recognition of the costs associated with leaving the occupation.

Organizational identification. Organizational identification is a term used in social psychology. It argues that people derive much of their identity from the social categories to which they belong (Tajfel & Turner, 1986). From the organizational psychology perspective, organizational identification occurs when an individual's beliefs about his or her organization become self-referential or self defining (Ashforth & Mael, 1996; Dutton et al., 1994; Pratt, 1998; Whetten & Godfrey, 1998).

Health Care Financing Administration, Medicare and Centers for Medicare and Medicaid Services. The Social Security Act was passed in 1965 and established both Medicare and Medicaid. The Medicare program was organized as a responsibility of the Social Security Administration (SSA), while the Social and Rehabilitation Service (SRS) administered the State Medicaid programs. SSA and SRS were agencies in the Department of Health, Education, and Welfare (HEW). The Health Care Financing Administration (HCFA) was created in 1977 to coordinate Medicare and Medicaid. Recently HCFA consolidated the administration of Medicare and Medicaid, and the Federal agency was renamed the

Centers for Medicare & Medicaid Services (CMS) on June 14, 2001.

Top Performing (Benchmark) Hospitals. Organizational performance, other than basic economic earnings-to-cost ratios and general statements of volume are rarely published because they are classified as proprietary, and metrics used within one organization may not be shared by other organizations. However, an annual report published annually since 1993 identifies top performing hospitals in the United States. *One Hundred Top Hospitals, Benchmarks for Success* is one of several reports created by HCIA-Sachs Institute and published annually by Solucient LLC. HCIA-Sachs Institute (now named The Solucient Leadership Institute) is a leading health care information content company, which provides information, analysis and related products for hospitals, integrated healthcare delivery systems, managed care organizations and pharmaceutical manufacturers.

The standards and dimensions in which hospitals have been ranked include financial management, operations and clinical outcomes. The primary source data for the analysis of the top performing hospitals in the United States is taken from the Medicare cost report. Submission of an annual cost report is a Federal requirement in order for a hospital to participate in and be reimbursed for services by the Federal Medicare program. Medicare cost reports include data for services provided to all patients who have received services at the hospital for the year. The accuracy of the information contained in the hospital cost report is certified under penalty of law.

The 100 Top Hospitals National Benchmarks for Success studies target general short-term acute care, non-federal hospitals operating in the United States. They include both for-profit and not-for-profit community hospitals and teaching facilities. Children's hospitals, psychiatric and rehabilitation specialty hospitals and hospitals with fewer than

25 acute care beds, or fewer than 500 total facility admissions, and hospitals with Medicare average lengths of stay longer than 30 days are excluded from the 100 Top Hospitals Benchmark reports. Hospitals that filed financial data with other hospitals, but filed utilization and cost data separately are also excluded. The reference to top performing (benchmark) hospitals includes all of the hospitals classified in the Top 100 Hospitals, National Benchmarks for Success reports published in 2000, and 2001. The Top 100 Hospitals, National Benchmarks for Success reports 2001 was not available at the time of this study (July-September, 2002).

Centers of excellence. In addition to producing the 100 Top Hospitals: National Benchmarks for Success, HCIA-Sachs developed several other studies ranking centers of excellence. They include; 100 Top Hospitals: ICU Benchmarks for Success (Solucient, 2001a) The 100 Top Hospitals: Cardiovascular Benchmarks for Success (Solucient, 2001b), 100 Top Hospitals: Orthopedic Benchmarks for Success (Solucient, 2001c) and 100 Top Hospitals, Stroke Benchmarks for Success (Solucient, 2001d). Complete lists of the 100 Top Hospitals recognized as the Benchmarks for Success and referenced in this study are located in the Appendices A-F. The primary source data for the analysis of the top performers (Centers for Excellence) is the Medicare cost report. While the top 100 hospital benchmark reports for the Centers of Excellence were published in 2000, and 2001, the data elements were gathered from the Medicare cost reports submitted for 1998 and 1999.

Medicare cost reports include data for services provided to all patients who have received services within a hospital for the annual reporting period. The reference to

centers of excellence in this study refers to the acute care hospitals identified and included in the Top 100 Benchmarks for Success reports. The data used to calculate the clinical measures are taken from the Medicare Provider Analysis and Review (MedPAR) data set from the Health Care Financing Administration. The hospital database includes data elements for more than 6,000 acute care and specialty hospitals operating in the United States.

The study group for the 100 Top Hospitals Cardiovascular Benchmarks for Success, 2001 (Solucient 2001b) included hospitals that treat the full spectrum of cardiology patients and included all hospitals with at least 30 patients in the acute myocardial infarction (AMI) diagnosis group; at least 50 patients in the percutaneous transluminal coronary angioplasty (PTCA) group, and at least 50 patients in the coronary artery bypass graft (CABG) diagnosis group. A list of the 100 Top Hospitals Cardiovascular Benchmarks for Success 2001 is included in the Appendix (Appendix D).

The study group for the 100 Top Hospitals: ICU Benchmarks for Success report (Solucient, 2001a) included data from 1,185 general acute care hospitals. The study group captured various clinical pathways through which a patient is admitted to an intensive care unit (ICU). Specifically (1) patients who presented with a qualifying primary admitting diagnosis (e.g., cardiac-arrhythmia, congestive heart failure, cardiac high mortality rate such as acute myocardial infarction, cardiac low mortality rate such as unspecified chest pain, angina pectoris, intermediate coronary syndrome; general acute problems such as unspecified septicemia, intestinal obstruction, hemorrhage, acute renal failure, alteration of consciousness, malaise and fatigue; neurological-high mortality rate such as intracerebral hemorrhage, acute cerebrovascular disease; neurological-low mortality rate such as

transient cerebral ischemia, syncope and collapse, convulsions; pulmonary such as neoplasms of bronchus and lung, pulmonary embolism, pneumonia, pleural effusion, acute respiratory failure, (2) patients who entered ICU after surgery, and (3) patients on a mechanical ventilator for at least 4 days.

Hospitals included in the 100 Top Hospitals ICU Benchmarks for Success study were required to have had at least 30 patients in all three patient subpopulations. Hospitals with fewer than 30 patients in any one of the three groups were excluded. Nine measures of clinical practice and operations efficiency were collectively applied to assess clinical outcomes and cost and resource utilization of ICU units. The nine measures were; risk adjusted complications index for primary procedure group, risk adjusted mortality index for admission diagnosis group, risk adjusted mortality index for primary procedure group, risk adjusted mortality index for mechanical ventilation group, adjusted length of stay for admission diagnosis group, adjusted length of stay for primary procedure group, adjusted ICU related ancillary cost per ICU day for admission diagnosis group, adjusted ICU related ancillary cost per ICU day for primary procedure group, and adjusted ICU related ancillary cost per ICU day for mechanical ventilation group. Solucient (2001b) reported that the 100 top hospitals have better clinical outcomes and stated:

> If all ICUs performed at the level of ICUs at the 100 Top benchmark hospitals, mortality rates could drop more than 20 percent for post-surgical patients and 15 percent for medical patients. Moreover, complication rates for post-surgical patients could be reduced by 19 percent.... The costs of ancillary services would fall nearly $66 Million annually.... The total cost of inpatient stays for ICU patients would fall by $1.4 billion per year.... The number of deaths for patients

on mechanical ventilation for at least four days would fall by over 8 percent. (Solucient, 2001b, p. 12)

The study group for the 100 Top Hospitals: Orthopedic Benchmarks for Success 2000 (Solucient, 2001c) included United States hospitals which had at least 200 patients coded to a diagnosis-related group (DRG) in Major Diagnostic Category (MDC) 08, Disease and Disorders of the Muscoloskeletal System and Connective Tissue. To be included in the study a hospital must have reported a minimum of 200 unique patient cases and at least 30 cases in each of four procedure groups; total knee replacements; total hip replacements; a combination of partial hip replacement; or open reduction with internal fixation of femoral neck. Data from 1178 hospitals were included in the study group (131 teaching hospitals with orthopedic residency programs, 378 teaching hospitals, and 669 community hospitals). The performance measures included six measures of clinical quality, operations and financial management. Specifically: mortality index, risk-adjusted for severity of illness; complications index; count of unique patients receiving orthopedic services; Average length of stay at the hospital, adjusted for illness; cost per patient, adjusted for illness severity and local wage differences, and percentage of patients who came from and were discharged home. A list of the 100 Top hospitals: Orthopedic Benchmarks for Success 2000 is included in Appendix E.

The 100 top hospitals Stroke Benchmarks for Success 2000 (Solucient, 2001d) report is also based on the Medicare Cost report data for 1999. Patients were included if their primary diagnosis was classified in one of three major neurological groupings; occlusion and stenosis of precerebral arteries including embolism, narrowing obstruction or thrombosis of the basilar, corotid and vertebral arteries; occlusion of cerebral arteries

including cerebral thrombosis, embolism or unspecified artery inclusion, and acute but ill-defined cerebrovascular disease. The hospital peer groups included 100 Teaching hospitals with neurology residency programs, 598 teaching hospitals without neurology residency programs and 1,265 Community hospitals operating in the United States. Six measures of clinical quality and operations efficiency were included to define benchmarks for superior hospital performance: stroke patient volume, risk adjusted patient mortality index, risk adjusted patient complications index, severity adjusted average length of stay wage and severity adjusted average cost, and percentage of stroke patients discharged to home or a Home Health Agency.

CHAPTER II

Literature Review

Organizational Commitment

Interest in the relationship between leadership, attitudes and performance can be traced to the classic work of organizational theorist Chester Barnard (1938) who described organizations as cooperative systems integrating the contributions of individual participants. His organizational model included the attitudes and behaviors of all the individuals within the organization who play a role in the overall functioning, performance and goal attainment of the organization.

Organizational commitment research has focused on the psychological attachment of workers to their workplaces, the exploration of the possible factors contributing to their attachment, and the consequences of the attachment (Allen & Meyer, 1990, 1993, 1996; Angle & Perry, 1981; Becker, 1992; Becker, Billings, Eveleth, & Gilbert, 1996; Becker, Randall, & Riegel, 1995; R.B. Brown, 1996; S.P. Brown, 1996; Cohen, 1992, 1993; Fullagar & Barling, 1989; Luthans, Baack, & Taylor, 1987; March & Simon, 1958; Mathieu & Zajac, 1990; Morrow, 1993; Shore & Wayne, 1993; Tett & Meyer, 1993).

Steers (1977) proposed that the more committed the employee is to the organization, the more effort will be expended by the employee in performing work related tasks. The research interest in commitment is rooted in the fundamental belief that a relationship exists between the commitment of employees and their performance on the job (Aranya & Ferris, 1983; Becker, Randall, & Riegel 1995; Benkhoff, 1997; Brickman, 1987; Dunham, Grube, & Castaneda, 1994; Ellemers, Spears, & Doosje, 1997;

Koslowsky, 1990; Lawler, 1992; Mathieu & Zajac, 1990; Meyer & Allen, 1997; Morrow, 1993; Mueller & Lawler, 1999; Oliver, 1990; Randall, 1990; Reichers, 1985; Steers & Porter, 1991; Wallace, 1993). Interest in organizational commitment has been linked to the possibility that the level of organizational commitment held by an individual employee is positively related to job performance. The research stream has complimented the view that satisfied and committed employees are productive employees (Lee et al, 2000; Mathieu & Zajac, 1990; McGee & Ford, 1987; Meyer & Allen, 1997; Morrow, 1993; Morrow & McElroy, 1993).

The topic of commitment received attention over the years as companies and organizations have looked for ways to enhance employee contribution to organizational performance and productivity (Cohen, 1992; Morrow & McElroy, 1993; Randall, 1990; Reichers, 1985; Scholl, 1981; Steers & Porter, 1991). Early management researchers reasoned that given the costs associated with worker training and replacement, much could be gained by understanding the strength of the association between the individual employee and his or her level of commitment to the organization (Angle & Perry, 1981; Aranya et al., 1981; Becker, 1992; Ellemers et al., 1998; Mowday et al., 1982; Ostroff, 1992; Ritzer & Trice 1969; Sheldon, 1971). Another goal was to identify triggers for increasing employees' commitment and thereby reduce organizational expenses associated with worker recruitment and replacement (Huselid & Day, 1991; Meyer, Bobocel, & Allen, 1991; Meyer et al., 1989).

Angle and Perry (1981) proposed two models for the formation of organizational commitment; the member model in which commitment resides in the attributes and actions of the individual, and an organizational model in which commitment is a function

or outcome of the way that the member has been treated by the organization. The two models are differentiated by whether it is the individual member or the organization that initiates actions that ultimately lead to the member's organizational commitment.

Early literature proposed that commitment was the outcome of several factors: the rewards and costs derived from the job, the quality of the alternatives that are available to the individual, and the magnitude of an individual's investments in their job. The literature also suggested that a lack of employee commitment to the supervisor, the work, or the organization, could explain reduced effort and job dissatisfaction resulting in a lower level of productivity and performance (Angle & Perry, 1981; Arnold, 1990; Keller, 1997; Mowday et al., 1982; Oliver, 1990; Randall, 1990; Reichers, 1985; Salancik, 1977; Sheldon, 1971; Scholl, 1981, Whitener & Waltz, 1993; Wiener & Vardi, 1980).

The commitment literature has been criticized for the lack of consistency in the definition of commitment and subsequently the lack of consensus about measuring the construct (Allen & Meyer, 1996; Becker, 1992; Becker et al., 1995; Benkhoff, 1997; Boudreau & Berger, 1985; Brown, 1996; Cohen, 1993; Dunham et al., 1994; Huselid & Day, 1991; Kanungo, 1982; McGee & Ford, 1987; Morrow, 1993; Mowday et al., 1982; Oliver, 1990; Randall & Cote, 1991; Reichers, 1985).

Over the years commitment has been construed as a form of loyalty, as a psychological attachment, as an attitude, as a behavior, as a form of job centrality and as an extension of job satisfaction. Commitment has been defined as: the attachment of an individual's fund of affectivity and emotion to the group (Kanter, 1968), an attitude or an orientation toward the organization which links or attaches the identity of the person to the organization (Sheldon, 1971); a partisan, affective attachment to the goals and values

of the organization, to one's role in relation to goals and values, and to the organization for its own sake, apart from its purely instrumental worth (Buchanan, 1974); an attitude-like attraction to an organization (Hulin, 1991) and an exchange between the individual and the organization which occurs as a result of individual-organizational transactions or investments over time (Becker, 1992).

Researchers have investigated the focus of an individual's commitment and proposed that employees may be committed to the occupation, or to aspects of their work, or as a commitment to both organization and occupation (Becker, 1992; Becker et al., 1996; Morrow, 1993; Wallace, 1993). Researchers have explored employee commitment to top management and supervisors (Becker, 1992), commitment to work teams (Ellemers et al., 1998), commitment to careers, professions and occupations (Aranya & Ferris, 1984; Arnold, 1990; Blau, 1985; Meyer et al. 1993; Morrow & Wirth, 1989) commitment to unions (Fullagar & Barling, 1989; Gordon et al., 1980) commitment to level of job (Hrebiniak, 1974), commitment to top management's goals and values (Salancik & Pfeffer, 1977; Shore & Wayne, 1993), and commitment to nested units within the organization (Lawler, 1992).

Reichers (1985) proposed that organizational commitment could best be understood as a collection of multiple commitments. She was among the first to suggest that employees can have varying commitment profiles and that conflict and tension can exist among the foci of their commitments. She wrote that an organization is comprised of various coalitions and constituencies and listed owners/managers, rank-and-file employees, and customers/clients as examples of both conflict and collaboration.

Mathieu and Zajac (1990) published a meta-analytic review of organizational commitment and identified two main streams of commitment research: the nature of the commitment, and the entities to which an employee becomes committed. They summarized that commitment research was predicated on two basic assumptions: (a) there are two parties to the attachment: the focal individual and the organization (or occupation) of which he or she is a member, and (b) high commitment is preferable to low commitment.

Mathieu and Zajac (1990) reported mean sample weighted correlations, corrected for unreliability, between organizational commitment and 48 other work-related variables. They separated the study variables into three specific categories: antecedents, correlates, and consequences of commitment. The variables classified as antecedents of commitment included the individual's age, gender, level of education, position tenure, organizational tenure, perceived personal competence, salary, job characteristics, leader communication style, organizational size and role status. The correlates included motivation, job involvement, stress, job satisfaction, as well as satisfaction with supervisor, pay and coworkers. The consequences of commitment were summarized as job performance (ratings by others, and various output measures), perceived job alternatives, intent to leave, attendance, lateness and turnover. They reported the consequences of a low level of employee commitment included employee absenteeism, lateness, intent to leave, job performance, and turnover.

Mathieu and Zajac (1990) reported that job scope and group-leader relations reflected the strongest correlations with organizational commitment, and personal characteristics were generally found to have weak correlations with commitment.

Mathieu and Zajac (1990) suggested the different forms of commitment might represent separate constructs. They reported organizational tenure to be more related to commitment than position tenure though reported that both effects were small, position tenure was significantly more positively related to attitudinal commitment whereas organizational tenure tended to be more positively related to calculative commitment. Job level correlated positively with commitment r =.178 across 13 samples but the difference was not significant, p >.05. They wrote "jobs that are perceived to be more complex or perhaps enriched, yield higher commitment levels" (p 178).They reported the correlation between organizational commitment and turnover was usually statistically significant, negative and ranged between -.02 to -.48. Regarding the link between commitment and performance, they wrote, "Although higher levels of commitment may relate to improved job performance in some situations, the present findings suggest that commitment has very little direct influence on performance in most instances" (p. 184).

Becker and Billings (1993) identified four patterns of commitment to various constituencies within the organization; employees attached to their supervisor and work group, those who are attached to top management and the organization, those who are attached to their supervisor, the work group top management and the organization, and those who are uncommitted.

Brown (1996) suggested the individual's interpretation and evaluation of commitment have contributed to differences in how the term has been described.

> Foremost is a person's interpretation and evaluation of a commitment --whether a person sees it largely in positive, neutral, or negative terms. Affecting this evaluation process are current attitudes and circumstances, organizational factors

> and the history of the commitment, the reasons driving the development, and the degree to which a person was aware, at the time, of forming a commitment ... If organizational experiences lose appeal, a person can be expected to reevaluate the commitment be it to organizational membership. If they remain positive, then it follows that the evaluation would remain positive. People may be more likely to initiate commitments when the commitment is perceived to include certain outcomes and rewards that justify the commitment. The antecedent factors may do a great deal to predispose people to make commitments, and that may be their primary role in commitment development. (R.B. Brown, 1996, p. 234-238)

Cohen (1992) completed a meta-analysis which examined the antecedents of commitment across occupational groups to determine whether the relationships between organizational commitment and its antecedents differ across white collar and blue-collar groups. The blue-collar employees included unskilled, semi-skilled and skilled employees in industrial organizations. White-collar employees were categorized into two subgroups, professional (e.g., scientists, engineers, nurses, accountants) and semi-professionals (e.g., clerical and administrative employees). Cohen found the relationship between organizational commitment and personal antecedents (e.g., tenure, education, marital status gender and motivation) was stronger for blue collar than for white-collar groups, and income was linked to a stronger relationship with occupational commitment for professionals than for nonprofessionals. Cohen proposed that the effect of income upon the organizational commitment of professionals indicated extrinsic rewards as an important factor for professionals. He proposed fewer employment opportunities considerations influenced the commitment of those in low status occupations and

reasoned white-collar employee turn-over would be influenced by level of organizational commitment. Cohen recommended an increased emphasis on programs designed to increase the employees' identification with and attachment to the organizational goals as a strategy to reduce turnover in white-collar employees.

Findings from studies have revealed differences between organizational commitment and other work related constructs. Specifically, commitment has been found to be distinct from job satisfaction, job involvement, career salience, job centrality, occupational commitment, work group attachment and turnover intention (Brooke, Russell, & Price, 1988; Cohen, 1993; Huselid & Day, 1991; Kanungo, 1982; Keller, 1997; Mathieu & Farr, 1991; Meyer & Allen, 1996, 1997; Morrow, 1993; Munro, 2001; Randal & Cote, 1991; Tett & Meyer, 1993; Vandenberg & Lance, 1992). Specific distinctions have been made between the extent to which workers like their jobs (job satisfaction), the degree to which they are absorbed in or preoccupied with their job (job involvement) and the degree of attachment (commitment) they feel and demonstrate toward their organization (Becker, 1992; S.P. Brown, 1996; Meyer & Allen, 1997).

Distinctions have also been identified between attitudinal and behavioral approaches to commitment (Becker, 1992; Brown, R.B. 1996; McGee & Ford, 1987; Meyer & Allen, 1984, 1997; Morrow, 1993; Mowday et al., 1982). The attitudinal commitment literature focuses on the process by which people develop their relationship with the organization. From the attitude perspective, an individual's commitment develops from the combination of work experience, perception of the organization and an individual's personal characteristics or traits. In combination these factors lead to the

development of feelings of attachment to an organization. The feelings of attachment formulate an attitude that is classified as commitment (Mowday et al. 1982).

Brickman (1987) suggested that commitment includs both a positive element of desire and a negative element of obligation.

> In looking back, people either say that they really wanted to, or they really had no choice. Each of these represents a form of commitment ... the former represents a commitment to the activity as an end in itself, the latter, a commitment to the activity as a means to some other end. Each is also a form of illusion since there is usually both some element of choice and some element of coercion or external force in all behavior. What happens is that one of these elements comes to dominate the psychological field in which the activity is experienced and the activity is thus felt as entirely free or entirely coerced. (p.173)

When positive elements dominate, the resulting commitment is characterized by an enthusiasm, or the sensation people experience when they act with total involvement in an activity. Conversely, when the negative element dominates the commitment is characterized by a persistence to sustain the activity but without enthusiasm (Brickman 1987).

The studies examining commitment as an attitude have involved the measurement of an individual's feelings or attitudes of organizational attachment along with other variables that have been categorized as either antecedents to or consequences of their commitment. The studies have been designed to determine if the strength of an individual's commitment is correlated with desirable outcomes such as lower levels of absenteeism, lower employee turnover, organizational citizenship, more favorable

employee evaluations, and higher levels of employee job satisfaction (Becker et al., 1996; Meyer & Allen 1997; O'Reilly & Chatman 1986; Testa, 2001; Van Dyne, Graham, & Dienesch, 1994; Wallace, 1993, 1997). Munro (2001) found that organizational commitment was correlated .82 with job satisfaction and -.81 with intention to leave.

One of the central ideas of the behavioral approach to commitment includes the concept of 'side bets' or calculative commitment. Becker (1960) proposed the idea of side-bet investments as a factor that links an individual to commit to certain pattern of behavior "because they recognize the costs associated with discontinuing the activity" (p. 33). In other words, individuals become obligated to an organization because of the benefits realized from investments that have been made to the organization. The longer an individual remains with an organization or an occupation, the more investments will have been made, the more benefits will have accrued, and the higher the cost associated with leaving becomes. Examples of benefits include seniority, salary range, vacation and retirement benefits. Kanter (1968) used the term "continuance commitment" to describe the employee dedication to remain with the organization when remaining with the organization could be linked to the benefits of their investments of time resulting in reluctance to detach from the organization and the benefits associated with tenure or position status.

The side-bet perspective states that individuals calculate or assess the value of their own attitudes and behaviors by comparing their inputs to outcome ratios. The side-bet theory of commitment links the psychological attachment of an individual to an organization to the personal cost(s) associated with leaving the organization. If an individual has few feasible or perceived alternatives, in terms of another job or career,

commitment to the current organization or occupation is strengthened because the benefits would be eliminated if the individual left. The individual becomes committed to avoid losing the accumulated benefits. Commitment increases as more benefits are accumulated. In other words, the individual employee is committed to remain in order to retain benefits and minimize losses (Hrebiniak & Alutto, 1972; Wallace 1997).

Allen and Meyer (1990) explain that individuals who invest considerable time, education and energy mastering a job skill that cannot be transferred easily to other organizations are betting that their investment of time will pay off with continued employment with that organization. Researchers evaluate and test the side-bet proposal by demonstrating that as the investments made, or benefits of staying with the organization or occupation increases, commitment also increases (Meyer & Allen, 1997; Wallace, 1997).

Cohen and Lowenberg (1990) published a meta-analytic analysis critical of Becker's (1960) side-bet theory. They wrote that all 50 of the side-bet studies referenced either affective measures of organizational commitment or an emotional response to the organization or occupation.

Wallace (1997) wrote there is little support for Becker's (1960) side-bet theory because his theory was tested largely with the Organizational Commitment Scale – a measure now regarded as an indicator of the affective dimension of organizational commitment (Allen & Meyer, 1996; Benkhoff, 1997; Reichers, 1985). Wallace described affective commitment as an emotional response, and saw calculative, side-bet, or continuance commitment as "largely influenced by the presence or absence of penalties associated with the decision to discontinue membership with the organization or

occupation" (p.3). Continuance commitment has come to be associated with a lack of positive motivation and support; the person stays because of a lack of an attractive alternative (R.B. Brown, 1996; Cohen & Hudecek, 1993; Meyer, Allen, & Topolnytsky, 1998).

O'Reilly and Chatman (1986) proposed commitment as the basis and underlying foundation of the individual's psychological attachment to an organization. Their work was informed by the work of Kelman (1958), who studied the link between attitude formation, attitude change and behavior. Kelman wrote that an individual's behavior is ultimately motivated by goal internalization, the adoption of attitudes and behaviors which are consistent with their personal goals or values orientation.

O'Reilly and Chatman (1986) studied university non-faculty employees and proposed that an individual's commitment to an organization is predicated on three separate premises: compliance to obtain rewards, identification with others to belong, and internalization of values. Commitment based on a compliance relationship occurs when the individual expects benefits in return for his behavior and involvement within an organization. Individuals adopt attitudes and behaviors simply to gain access to specific rewards. Identification for the purpose of affiliation occurs when people adopt attitudes and behaviors in order to be associated in a self-defining relationship with another person or group. Attitudes and behaviors are accepted in order to belong and to maintain a satisfying relationship with the group. Individuals feel a pride of association with the group. Internalization implies a congruence of the organizational values with those of the individual. The individual personally holds the values espoused by the organization.

Internalization is associated with embracing other's values and beliefs more deeply

than identification, and is profiled as a more enduring attitude than identification. Internalization occurs when people adopt attitudes and behaviors *because* those attitudes and behaviors are consistent with the individual's own value system. O'Reilly and Chapman (1986) proposed that compliance, identification and internalization all contribute to organizational commitment. However, the measure of commitment they proposed to measure their conceptualization was criticized because of a lack of discriminate validity among the scales. The measures of compliance, identification and internalization tended to correlate highly with one another (Becker et al.1996; Vandenberg, Self, & Seo, 1994).

Researchers have described organizational commitment as taking different forms. Mowday et al. (1982) formally conceptualized commitment as having three components: A strong belief in and acceptance of the organization's goals and values; a willingness to exert considerable effort on behalf of the organization; and a strong desire to maintain membership in the organization (p. 27).

Employee commitment has been labeled calculative and behavioral (Becker, 1960; Hrebiniak & Alutto, 1972; Koslowsky, 1990; Mathieu & Zajac, 1990), affective or attitudinal (Blau, 1988; Colarelli & Bishop, 1990; Meyer & Allen, 1988; Randall, 1988) and normative meaning that a sense of obligation binds the individual to the organization (Allen & Meyer, 1990, Weiner, 1982). These distinctions have been profiled by various researchers as competing types, categories of commitment and as separate components of the commitment construct (Becker, 1992, Becker et al., 1996; Meyer & Allen 1997; Morrow, 1993, Randall & Cote, 1991; Reichers, 1985).

Organizational Commitment (OC) was introduced with its companion measure, a 15 item Organizational Commitment Questionnaire (OCQ). Mowday et al. (1979) designed the OCQ to measure individual commitment to the organization. They explained the instrument was designed to reflect intentions, motivations and values. Three specific questions on the OCQ measure a person's intent to behave (i.e., "I would accept almost any type of job assignment in order to keep working for this organization"). Other questions focus on commitment as a motivator ("this organization really inspires the very best in me in the way of job performance") and commitment as an indication of agreement in values ("I find that my values and the organization's values are very similar").

Despite its frequent use and consistent reports of internal reliability between .74 to .88 (Mathieu & Zajac, 1990; Morrow, 1993), the OCQ has been criticized for failing to acknowledge the multiple types of commitment that individuals may have, for its working definition of commitment and for the ambiguity of several items contained in the scale (Becker, 1992; Benkoff 1997; Morrow 1983; Meyer & Allen, 1997). The OCQ has been specifically criticized for the underlying definition used when developing the scale and for measuring little more than affective commitment, or a strong liking for an organization (Ashforth & Mael, 1989; Benkhoff, 1997; Brown, 1996, Pratt, 1998).

Attempting to resolve the confusion and clarify the commitment construct, Meyer and Allen (1991, 1997) proposed a categorization of commitment and introduced scales designed to measure three differentiated components or themes of commitment (i.e., affective, normative and continuance commitment), rather than distinct types of commitment. They suggested that an individual's commitment profile could be

comprised of some degree of all three components (Allen & Meyer, 1990, 1996; Meyer & Allen, 1997; Meyer et al., 1993).

Affective commitment is defined by Allen and Meyer (1996) as an individual's identification with involvement in and emotional attachment to the organization. Persons with strong affective commitment remain with the organization because they *want* to do so. Employees whose experiences within the organization are consistent with their expectations and satisfy their basic needs tend to develop a stronger affective attachment to the organization than do those whose experiences are less satisfying. Affective commitment has been found to be most closely related to the OCQ and to the definition of commitment proposed by Porter et al. (1974). Meyer and Allen (1997) wrote that on-the-job experiences early in a person's job tenure were found to play a significant role in the development of affective commitment. Affective commitment is likely to be low among employees who are unsure about their role, or who are expected to behave in ways that seem incompatible with their own understanding of their roles.

Continuance commitment is the component of commitment linked to an individual's awareness of the cost that would be associated with leaving an organization. Continuance commitment develops as employees recognize they have accumulated investments that would be lost if they left the organization, or as they perceive that their employment alternatives are limited. Employees with strong continuance commitment stay with the organization because they believe they need to remain. Meyer and Allen (1997) found in their work with nurses, that as continuance commitment increased, affective and normative commitment decreased.

Normative commitment refers to commitment based on a sense of obligation to the organization (Allen & Meyer, 1996). Normative commitment develops as the result of an individual's socialization experiences on the job or from benefits (e.g. tuition payments, skill training) that create within the individual a sense of obligation to reciprocate with loyalty (Scholl, 1981; Meyer & Allen 1991,Wiener & Vardi, 1980). Employees with a strong normative commitment stay because they feel they ought to remain with the organization.

Summary of organizational commitment research findings

Some demographic variables have been found to link to organizational commitment. Mathieu and Zajac (1990) reported age and marital status have been positive predictors of commitment. Older and married individuals demonstrated greater organizational commitment than younger and non-married individuals. The most consistent finding in the organizational commitment literature has been the link between organizational commitment, job satisfaction, employee attendance, and employee turnover (Cohen & Hudecek, 1993; Meyer & Allen, 1997).

Researchers have consistently shown that the stronger the employee's commitment to the organization, the less likely the individual is to either leave the organization or express an intention to leave the organization. Committed employees have demonstrated certain behavioral characteristics such as reduced tardiness, lower turnover and lower absenteeism (Mathieu & Zajac, 1990; Meyer & Allen, 1997; Randall, 1990). Meyer et al (1989) reported affective commitment had a correlation of .15 with a

composite measure of performance and continuance commitment had a correlation of -.25 with performance however, subsequent studies have not replicated those findings.

Organizational commitment has been positively associated with motivation and job involvement, expressions of positive affect and loyalty, and prosocial behavior (Brown, S.P., 1996). Commitment has been linked to certain other organizational characteristics such as decentralized decision making and to dispositional characteristics such as locus of control (Brooke, Russell, & Price 1988). As a result of these findings, organizations have been encouraged to value commitment among their employees because it is linked prosocial behavior within the organization.

Becker et al. (1996) found in their study of 1803 members of the graduating class of a large northwestern university that an individual's commitment to an immediate supervisor is more strongly related to performance than is an individual's overall commitment to an organization. They recommended that organizations concerned with employee performance should focus their efforts on commitment to supervisors rather than on commitment to the organization in order to develop high performance work groups or units within organizations.

There is consensus that commitment psychologically binds an individual employee to a focus and that employees who are committed to the organization, supervisor, or their work group are more likely to remain in the organization than are uncommitted employees (Becker, 1992; Lawler, 1992; Meyer & Allen, 1997; Randall & Cote, 1991). There is also consensus in the literature that commitment is a complex construct reflecting multiple bases or motives and objects (Becker, 1992; Benkoff, 1997;

Eby, Freeman, Rush, & Lance, 1999; Lawler, 1992; Meyer & Allen, 1997; O'Reilly & Chapman, 1986; Reichers, 1985; Tett & Meyer, 1993; Wallace, 1993).

Occupational Commitment

During the 1960's and 1970's researchers began to differentiate between commitment to an occupation and commitment to an organization and assumed an inherent conflict existed between them (Arnold, 1990; Becker et al., 1996; Blau, 1985, 1988; Hrebiniak, 1974; Lee et al., 2000; Wallace, 1988, 1997; Wiener & Vardi, 1980). Professional commitment is a career-focus form of commitment. Occupational commitment was defined by Aranya et al. (1981) as the relative strength of identification with and involvement in one's profession, occupation, or career. Occupational commitment is a person's attitude or belief in and acceptance of the values of his or her chosen occupation or line of work, and a willingness to maintain membership in that occupation (Blau, 1985; Vandenberg & Scarpello, 1994; Wallace, 1993). Colarelli and Bishop (1990) defined it as the development of personal career goals, and the attachment to, identification with and involvement in those goals.

Ritzer and Trice (1969) wrote that the organization is not as important for professionals as it is for nonprofessionals. They proposed that because of the lack of meaningful job content individuals in low status occupations (e.g., janitors, clerks) are unlikely to be committed to their occupation but more likely to be committed to their organization, and in contrast, the individuals who held positions with a higher status or in professional occupations are more likely to be committed to their occupations than to the organization.

> Organizational commitment arises from a realization by the individual that the occupation has little to which he can commit himself. In order to make his working life meaningful, an individual must commit himself to something. If the occupation is weak structurally, the organization remains as the major alternative to which the individual may commit himself. (p. 478)

Ritzer and Trice concluded that organizational commitment should be stronger for non-professionals than for professionals, because professionals do not direct their expectation toward the organization but toward their occupation. Sheldon (1971) studied a sample of scientists, and concluded that professionals with high commitment to the profession tended not to be committed to the organization.

Buchanan (1974), Hrebiniak (1974), and Steers (1977) each found commitment to be significantly related to the extent to which the employees perceived that their organization valued employee interests. Commitment levels were higher when the employees' expectations had been met.

Aranya and Ferris (1983) studied the professional and organizational commitment of accountants and reported that professional workers tend to be more committed to their profession than to their employer, especially in bureaucratic organizations. Aranya and Ferris (1984) also reported a negative correlation between professional commitment and organizational commitment. In other words, the higher the level of professional commitment, the lower the level of organizational commitment.

Koslowsky (1990) compared the level of organizational and job commitment between staff and line police officers working in Israel and reported that the line

employees demonstrated higher levels of organizational commitment than staff employees.

Riggs and Knight (1994) reported a direct link between work group success and commitment to the group in their research of work groups. They also explored the impact of group success and failure on motivational beliefs at the individual unit of analysis. Their study was comprised of 55 employees of the student union at a large Midwestern university, 91 employees of a state cooperative extension service for a Midwestern state, and 334 employees in 52 work groups of a large Midwestern university. They reported that the perceived success of the work group positively contributed to individual employee beliefs about their personal ability, level of work satisfaction and organizational commitment.

Wallace (1995a) completed a meta-analytic review of 15 published studies occurring between 1966 and 1989 and found a moderately positive correlation between occupational and organizational commitment (r = .452). Samples designated as highly professional included staff professionals, accountants, nurses and professional and university employees in science departments. The samples characterized as low professional included personnel managers, business graduates (managers and non-managers), insurance agents, supervisory employees, and newspaper supervisors. The higher end of the professionalism continuum (e.g. law and medicine) was not represented in their study. The degree of commitment varied across occupations by the degree of professionalism for the occupation, and within occupations according to the position or rank that the individual held within the organization. Wallace (1993) reported that the higher the professionalization of the occupation, the higher and more negative the

association between occupational and organizational commitment. Wallace also reported that those committed to the profession and its goals were less likely to be highly committed to the organization and more likely to leave than those committed to the organization and she proposed that the relationship between profession and organizational commitment can have important consequences for an organization employing professionals (Wallace, 1995b).

Vandenberg and Scarpello (1994) addressed the question of which type of commitment predominates (e.g., occupational commitment or organizational commitment). They completed a longitudinal assessment of 100 management information systems professionals and concluded that commitment to the occupation is antecedent to commitment to the organization.

Researchers studying individuals from other work domains (teachers, accountants, police officers), have reported that the persons who are highly committed to their profession perform better than persons who are committed to the organization (Aranya & Ferris, 1984; Koslowsky, 1990; Organ, 1990).

Meyer and Allen (1993) modified the language in their three component measure of organizational commitment by substituting the words 'organizational commitment' with 'occupational commitment' in order to expand their research on nurses. They wrote that the relative influence of occupational and organizational commitment is determined by an individual's perception of how relevant the behavior is to the occupation compared with how relevant the behavior is to the organization. (If the nurses, for example, see helping another nurse as a professional responsibility, helping could be influenced more by occupational commitment than by a commitment to the organization.)

Ellemers, de Gilder, and Van den Heuvel (1998) studied bank employees and introduced a measure distinguishing between team-oriented commitment, occupational (career) commitment and organizational commitment. Individual bank employees who demonstrated higher levels of occupational commitment outperformed bank employees with lower levels of occupational commitment.

Lee et al. (2000) completed a meta-analytic review of occupational commitment and several person and work-related variables. Their analysis included 77 published studies, with samples ranging from 746 to 15,774 respondents. They reported occupational commitment was positively related to job involvement and job satisfaction and suggested that attitudes toward the job itself may be a central concern in commitment to the occupation. They reported a positive correlation between occupational and organizational commitment (r = .48). They reported that demographic variables did not correlate (or correlated only weakly) with occupational commitment. Occupational commitment was unrelated to gender, number of dependents and marital status. The demographic variable most strongly related to occupational commitment was income with a very modest correlation (r = .17).

There have been some consistencies in the research findings reported across foci and definitions of commitment. However, major differences still exist in the explanations and definitions of the nature of the psychological state or attachment that is being described and the relationship between commitment and performance.

Identification and Commitment

Ashforth and Mael (1989) write from the social identification perspective and have proposed that confusion exists in the literature between the constructs of

identification and commitment. They assert that identification is the perception of oneness with or belonging to an aggregate. To identify, an individual needs not expend effort toward the group's goals; rather an individual needs only to perceive himself (or herself) as psychologically intertwined with the fate of the group. Identification involves psychological attachment, the sense of oneness with a specific organization. They believe that the two terms, commitment and identification, describe very different kinds of psychological attachment.

According to Ashforth and Mael (1989), and Mael and Ashforth (1995), identification occurs when people adopt attitudes and behaviors in order to be associated with a satisfying self-defining relationship with another person or group.

Dutton, Dukerich, and Harquail (1994) proposed that identification is tied to the perception of one's membership in and association with a group. They proposed that individuals are motivated to maintain a positive social identity and strive to enhance their self-worth through social comparison and categorization. Individuals behave in ways to strengthen and differentiate themselves from others who are not regarded in as positive a light. Dutton et al. (1994) suggested that confusion in both the working definition(s) of commitment and the measurement of commitment to either occupation or organization could in part explain why the research findings linking commitment with performance have been so disappointing. They explain that identification means that the focus of attachment becomes self-defining.

> When a person's self-concept contains the same attributes as those in the perceived organizational identity, we define this cognitive connection as organizational identification. Organizational identification is the degree to which

a member defines himself or herself by the same attributes that he or she believes define the organization. (p. 240)

Social identity is created when individuals perceive themselves to be in the same categories as those in which they place others (Hogg & Abrams, 1988). People identify with groups or organizations for a variety or reasons: it helps them to define themselves, provides a sense of belonging and elevates self-esteem (Benkhoff, 1997; Rousseau, 1998). "People derive their identity, their sense of self, their self-concept in great part from the social categories to which they belong. Social Identity Theory holds that all persons engage in self-categorization and asserts that social categories serve as a system of orientation which helps to create and define the individual's place in society" (Tajfel, 1981, p. 255).

The self-concept is the way the person sees himself. According to Ashforth and Mael (1989) social identification is a process by which individuals classify themselves and others into different social categories such as "woman," "Methodist", or "engineer." Social identification serves the function of ordering the social environment and enables individuals to locate or define themselves in that social context. As such, social identification provides a partial answer to the question of "who am I?" Social identities are aspects of individuals' self-concepts and derive from the social categories to which they perceive themselves as belonging (Leonard, Beauvais, & Scholl, 1999; Tajfel & Turner, 1985).

Siegel and Sisaye (1997) view the self-concept as a prime motivational variable. They studied journalists and concluded that people strive to maintain their views of themselves by engaging in the behavior that is most consistent with their self-concepts.

Siegel and Sisaye, (1997) concurred with Cohen et al. (1988) who suggested that the behavior most likely to occur in a given situation is that which the individual expects will best maintain or enhance his or her self-concept.

Siegel and Sisaye (1997) contend that "organizational commitment should be conceptualized in terms of the second component of the Porter et al. (1974) definition, namely, the willingness to exert effort towards organizational goal accomplishment. We define organizational identification as a function of the importance of the organizational goals and values in the person's self definition" (p.3). Individuals who identify themselves closely with their employer organizations are more likely to be ready and willing to engage in whatever organizational demands that are prescribed by their organizations.

Dutton et al. (1994) wrote that organizational identification does not connote pride in affiliation, but instead reflects the degree to which the content of the member's self concept is tied to his or her organizational membership. When organizational identification is strong, a member's self concept has incorporated a large part of what he or she believes is distinctive, central and enduring about the organization into what he or she believes is distinctive, central and enduring about him or herself. Organizational commitment is associated with how satisfied a person is with the organization. In contrast, organizational identification is the way the individual perceives or defines him or herself.

Pratt (1998) writes that identification occurs when an individual's beliefs become self-defining, and asserts that identification is distinct from commitment. Identity and group belonging are linked from the perspective that the way one defines oneself is

composed of self-descriptions of the characteristics of the groups to which one belongs. This belonging is not merely knowledge of a group, but ascribes a definition about who one is and how one should behave.

The contrast between organizational commitment and organizational identification resides in how the constructs are defined and measured. The Organizational Commitment Questionnaire (Porter et al., 1974) defines commitment as the strength of an individual's identification and involvement in a particular organization and characterizes it by a strong belief in and acceptance of the organization's goals and values, a readiness to exert effort on behalf of the organization and a strong desire to remain a member of the organization. Meyer and Allen (1991) define affective commitment as "the employee's emotional attachment to, identification with, and involvement in the organization" (p. 67). Explicit in both of these definitions is the idea that identification is necessary to organizational commitment.

Abrams, Ando, and Hinkle (1998); Ashforth and Mael (1996); Dutton et al. (1994); and Pratt (1998) have written that the working definitions of commitment imply behavioral intention, attitudes, and affect, but do not equate with the idea of the organizational values and beliefs being self defining.

Ashforth and Mael (1989) attempted to make organizational identification and organizational commitment more conceptually distinct. Their work differentiates identification and commitment in two ways. First, they note that the terms differ in focus. They write that many organizations have similar values and goals, and organizational commitment is a strong belief in those values and goals, but not in the specific organization per se. In other words, organizational commitment need not be

organization specific. In contrast, they hold that organizational identification *must* be organization-specific, because it is the specific organization that is seen as being self-defining for the individual. Second, they state that the measures of commitment do not measure an individual's feelings of oneness with the organization and therefore are conceptually distinct from their instrument, which measures organizational identification.

Identification is also linked to the individual's social needs. Ashforth and Mael (1989) describe identification as the perception of oneness or belongingness to some human aggregate, and regard belonging as being central to organizational and professional identification. Hence, there is a qualitative difference insofar as commitment is equated with the acceptance of values, while identification is equated with possessing organizational values. In other words, commitment is an attitude or behavior indicating acceptance, while identification is more than an attitude, or an acceptance of a mission vision or values of an organization. Identification can blur the boundary between the employee's concept of self and the organization to which he or she is attached. The organization becomes a mental model of how individuals come to view themselves.

Rousseau (1998) explains that identification is cognition of self in relationship to the organization:

> At a deeper level, identification occurs when the employment relationship alters the mental model individuals have of themselves to incorporate the organization itself (e.g., where being a 'Harvard professor' forms part of the individual's self-schema). Such organizational identification can form part of an individual's self-concept by altering individuals' mental models of self in enduring ways as United

> Parcel Service employees say that they 'bleed brown' out of a sense of attachment to the company. (p. 218)

Identification expands the self to include the organization. Identification refers to a cognitive state, not a specific behavior or a particular emotion although identification can influence both behavior and emotion.

The most salient distinction between commitment and identification is that identification explains the individual-organization relationship in terms of an individual's self-concept: organizational commitment does not (Pratt, 1998). "As such the two seem to ask very different questions. Organizational commitment is often associated with "How happy or satisfied am I with my organization?" Organizational identification by contrast is concerned with the question; "How do I perceive myself in relation to my organization?" (p. 178).

Pratt (1998) wrote that the components of commitment tend to focus on the reasons for staying and tend to be more similar to the notion of compliance than to identification. Pratt linked organizational identification to greater employee compliance, lower attrition, lower intergroup conflict and prosocial behaviors. He suggests that those who favor attitudinal conceptualizations of commitment tend to see identification as being either identical with commitment as measured by the OCQ, or identical to affective commitment as measured by the Meyer and Allen Three-Component Measure of Commitment.

Mael (1988) developed a five-item measure of organizational identification (OID) and demonstrated that identification and commitment measures are different constructs (Mael, 1988; Mael & Ashforth 1995; Mael & Tetrick 1992). Coefficient

Alpha for the OID measure has consistently been reported within the range of .74 to .80 (Dutton et al. 1994; Mael & Tetrick, 1992).

The items included in the OID are:

(a) When someone criticizes the (occupation, organization) it feels like a personal insult;

(b) I am very interested in what others think about (occupation, organization);

(c) When I talk about (occupation, organization) I usually say "we" rather than "they;"

(d) The (occupation, organizations) successes are my successes; and

(e) When someone compliments (the occupation, organization) it feels like a personal compliment.

Answers are arranged on a five-point scale for the instrument where 1= strongly disagree, and 5 = strongly agree.

Leadership, Performance and Commitment

Leadership has become an icon in the popular management literature and like commitment is one of the most studied topics in the academic organizational and management literature (Schein, 1992). It has been a popular topic for decades, Stogdill (1974) wrote, "there are almost as many definitions of leadership as there are persons who have attempted to define the concept" (p.259).

The earliest leadership studies searched for personal qualities that distinguished leaders from non-leaders (Terman,1904). The characteristics most frequently studied included intelligence, dominance, adjustment and masculinity. Later reviews of this stream of research failed to find consistent support of any particular trait (Mann, 1959, Stogdill, 1948). Barnland (1962) concluded that leadership depended not on individual

traits but on situational variables.

Fiedler (1967) presented an approach to understanding leadership effectiveness that was based on the interaction of leader traits with situational parameters. He wrote that groups led by task oriented leaders performed best in situations of high control and predictability or low control and predictability, and that groups led by relationship-oriented leaders preformed best in the situations of moderate control or predictability. Leadership has been referred to as the process of influencing others, as a process whereby influence is exerted by one person over other people to guide, structure and facilitate activities and relationships within a group or an organization (Chemers, 2000; Hart & Quinn, 1993; Hogan, Murphy, & Hogan, 1994; Hogg, Hains, & Mason, 1998; Hollander, 1995). Zaccaro, Foti and Kenny (1991) suggested that trait-based variance in leadership may be due to social perceptiveness and response flexibility.

Yukl (1998) summarized four major lines of leadership research: the trait approach focuses on the personal attributes of leaders. The Great Man theory of leadership, for example, argued that successful leaders possessed traits of personality and character that set them apart from followers or subordinates. The second category is the behavior approach and focuses on what leaders do or accomplish on the job. The third category is the power-influence approach, which examines the processes of influence between leaders and others and seeks to explain leadership effectiveness in terms of the amount and type of power possessed by a leader and to identify patterns of leader behavior associated with high productivity. The fourth category is the situational approach to the study of leadership and emphasizes the importance of contextual factors such as the nature of the work, the nature of the external environment, the characteristics

of the followers, and the organizational culture.

Yukl (1998) defined leadership as "the process wherein an individual member of a group or organization influences the interpretation of events, the choice of objectives and strategies, the organization of work activities, the motivation of people to achieve the objectives, the maintenance of cooperative relationships, the development of skills and confidence by members, and the enlistment of support and cooperation from people outside the group or organization" (Yukl, 1998, p. 5).

Leadership has also been defined as "the process of influencing the activities of an organized group toward goal achievement" (Rauch & Behling, 1984, p. 36), and as "a process of social influence in which one person is able to enlist the aid and support of others in the accomplishment of a common task" (Chemers, 2000, p.27). Haslam (2001) wrote that leadership is the impact of one person on the behavior of many, and proposed leadership as the key to effective and efficient organizations.

The CEO of an organization is often referred to as "The corporate leader" (Norburn, 1989). The CEO's role and influence has been linked to the strategic direction, structure, culture and internal processes of the organization (Daily & Johnson, 1997, Hart & Quinn, 1993; Yukl, 1998). Some scholars have written that leaders and managers "play a critical role, if not *the* critical role in ensuring that they systems and structures of the organization facilitate the coordination and alignment across levels and functions necessary for organizations to succeed" (Schneider, 1996 p. 565). The CEO occupies a position of unique influence. However, the degree and scope of influence that a Chief Executive Officer has is controversial in the literature. Researhers do not universally hold the view that leadership is a critical factor in an organization's overall performance

(Chemers, 2000; Finkelstein & Hambrick, 1996; Hogan, 1994; Yukl, 1998, 1999). For example, Meindl, Ehrlich, and Dukerich (1985) contend that leadership is merely a perception that allows people to make sense out of organizational events and that attributions to leaders will be greatest when organizational performance is extreme.

Halpin and Winer (1957) wrote that a major portion of the variability in leader behavior could be explained by two factors; consideration for the feelings of subordinates, and initiation of structure. Initiation of structure refers to the leader's use of standard operating procedures, criticisms of the work of subordinates, and emphasis on performance, and relates to a focus of building a structure for specific task accomplishment, or outcomes.

Hogg et al. (1998) applied social identity theory to leadership and wrote that despite a tendency for followers to value leaders who embody group values, they also heavily weight their own perceptions of the leader's competence in their evaluations and support of their leaders.

Much of the scholarly fieldwork on leadership effectiveness has focused on middle managers, team leaders, supervisors, work group leaders (Bass, 1981; Yukl, 1998) or has been conducted in controlled settings (Hogg et al. , 1998). The leadership literature is filled with descriptions of the tasks of managers, descriptions of traits, situations, styles of leadership, discussions of leadership decision making, how leaders assign priority to their tasks, and to the study of leadership qualities such as intelligence, gender, height, and other demographics (Barnlund, 1962; Fiedler, 1967; Mann, 1959; Mintzberg, 1973; Yukl, 1989, 1998; Zaccaro et al., 1991). However, the literature remains deeply divided regarding the actual organizational effects of leaders. There has

been very little empirical investigation in field settings into the relationship between top executive leadership and overall organizational performance.

It was not the aim of this research to add to the definitions of leadership, but rather to explore the relationship of organizational performance and the commitment of the leader (CEO). While there is disagreement about the definition of leadership and the scope of influence that a leader wields, there is some agreement that the study and assessment of leadership should include overall organizational performance indicators (Cohen et al, 1988; Finkelstein & Hambrick, 1996; Hart & Quinn, 1993; Venkatraman & Ramanujam, 1986). Hogan (1994) wrote,

> The proper way to study leadership is to compare the characteristics of persons in charge of successful groups, with persons in charge of comparable groups that were less successful ... there are problems associated with doing this kind of research, but it is the only research that gets at the heart of the leadership problem. (p. 3)

Hogan, Murphy, and Hogan (1994) wrote that a growing body of evidence supports the common sense belief that leadership matters, and that the appropriate way to measure leadership is in terms of team, group or organizational effectiveness. Hart and Quinn (1993) noted that there is reason to believe that the roles and behaviors of effective top managers differ from those of middle managers and stated, "top managers must be judged on the basis of corporate performance" (p. 545).

Previous studies linking employee commitment and performance have been disappointing because the researchers related individual commitment to singular individual performance outcomes; e.g., the number of unpaid hours of voluntary overtime

for insurance sales agents and staff professionals in a chemical company (Wiener & Vardi, 1980), discrepancies between money in the till and the registered balance for bank tellers (Shore & Martin, 1989), or performance appraisals of nurses by their supervisors (Meyer et al., 1989; Meyer et al., 1993). The studies, with few exceptions, have not attempted to demonstrate a link between individual commitment and overall organization performance (Ostroff, 1992).

Becker et al. (1996) studied a recent university graduating class and found that commitment to an organization was not correlated with job performance, although commitment to a supervisor was related to performance. Angle and Perry (1981) reported the commitment scores of bus drivers (representing 24 bus services) correlated with several outcome measures of organizational effectiveness including turnover rates, tardiness, and cost of operations. They reported that organizational commitment was negatively correlated with bus service turnover rates, and tardiness but unrelated to operating expenses of the bus service.

However, Osteroff (1992) studied the affective organizational commitment of junior high school and senior high school teachers in 298 U.S. and Canadian schools and reported that the level of organizational commitment of the teachers was positively correlated with several independent measures of overall student performance on academic achievement tests, student attendance and student satisfaction. Ostroff reported modest correlations between job satisfaction and organizational commitment of the teachers with aggregate organizational performance. In other words, the higher the level of commitment of the teachers, the higher the level of overall school performance.

Measuring Hospital Performance

Measuring overall firm performance is complex. Venkatraman and Ramanujam (1986) proposed three fundamental and essential dimensions for the study of organizational performance: (a) financial performance or accounting-based measures that indicate profitability; (b) business performance, or operation based indicators that reflect growth and future positioning of the organization; and (c) organizational effectiveness, which includes quality and reflects the non-economic or the purely financial aspects of performance. Benchmarks of organizational performance, other than basic economic earnings to cost ratios, are rarely published in the public domain because they are classified as proprietary. It is difficult to find performance measures that are relevant, objective and shared by more than one organization.

However, financial and other operating outcomes are reported, compared, and published as benchmarks for hospitals in the United States. Increasingly, outcomes of performance are important in health care. Hospital boards, consumer groups and insurance plans examine financial, clinical outcomes and operating performance indicators as the yardsticks to measure and reward hospital performance. There is an increasing emphasis on performance and quality indicators. The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) relies on structure and process outcome measures based upon accepted standards of good practice. Outcomes metrics are used by healthplans and are included in the Health Plan Employer Data and Information Set (HEDIS), the accreditation program of the National Committee for Quality Assurance for managed care plans to qualify providers for participating in various business options, payment levels and contractual arrangements.

An annual national benchmarking report has been published since 1993 ranking hospital performance and specifically names the 100 top performing hospitals in the United States. The benchmark standards by which hospitals are compared include financial management, operations, and clinical practices. Published performance measures include patient mortality, case complications, average length of hospital stay, hospital expense (costs), hospital profitability, proportion of outpatient revenue, employee turnover, and total facility occupancy. These standard indicators are accepted within the hospital industry today, and are required to be reported each year to the Centers for Medicare and Medicaid Services (CMS).

The financial management indicators are accepted general accounting measures in standard use in hospitals. The specific measures are: (a) Expense per adjusted patient discharge (total operating expenses divided by the number of discharges, and adjusted for case mix and wages); (b) Cash-flow margin (the sum of net income, depreciation and interest expense divided by the sum of net patient revenues and total other income); and (c) Asset-turnover ratio (net patient revenues divided by total facility assets).

Operations indicators include (a) average length of stay (adjusted for differences in severity of illness at admission); (b) proportion of outpatient revenues as compared with total facility revenues; (c) index of total facility occupancy (the sum of two measures: total occupancy rate during the year and the average of the percentage change in occupancy rate from the previous year); and (d) employee staffing patterns and turnover.

Clinical practice indicators include: (a) mortality, risk adjusted (the number of actual deaths divided by the number of deaths expected given the acuity profile of the

patients); and (b) complications that are risk-adjusted (i.e., the number of actual case complications divided by the number of expected complications, given the diagnosis and condition of each patient admitted). The Solucient risk adjustment uses a regression model that compares age, sex, procedures and comorbid patient characteristics, geographic location, hospital size, teaching status and urban versus rural within each ICD-9-CM (International Classification of Disease) code.

Performance measures are calculated within several categories: small hospitals (25-99 acute care beds in service); medium hospitals (100-249 acute care beds in service) large Community Hospitals (over 250 acute care beds in service, and at least 5 interns/residents or an intern/resident–per-bed ratio between 0.01 and 0.24), and major teaching hospitals (more than 400 acute care beds and an intern/resident ratio of at least .25). The Top 100 Hospitals Benchmarks for Success 2000 (Solucient, 2001) study group included 1322 hospitals from the small hospital comparison group, 1130 hospitals from the medium hospital comparison group, 242 hospitals from the large community hospital comparison group, 297 hospitals from the teaching comparison group and 101 hospitals from the major teaching comparison group. The aim of the annual study is to report the level of performance outcomes that the top performing hospitals are realizing, and which the rest of the nation's hospitals can use as a performance target. The identification of hospitals that provide high quality care, operate efficiently and produce superior financial results continues to offer the healthcare industry a direction for positive change.

The Top 100 Hospitals Benchmarks for Success document reported that if all U.S. acute care hospitals were to perform at the level of that year's benchmark hospitals,

the results for the industry would be dramatic: expenses would decline by an aggregate $24.5 billions per year, and inpatient mortality and complications would each drop 22%.

The performance measures used in the Top 100 Hospitals Benchmarks for Success reports are standard measures in routine use and recognized as reflecting important attributes of performance in the healthcare industry today (Griffith, Knutzen & Alexander, 2001). The specific indicators are:

1. Risk-adjusted mortality index. The lower the mortality index, the greater the survival ratios of the patients in the hospital.

2. Risk-adjusted complications index. This is a measure that demonstrates the degree to which complications occurred, but were not expected, considering the patient's condition. It is calculated by dividing the number of expected complications, given the risk of complication for each patient, and adjusted for differences in hospital characteristics (size, geographic location, teaching status) and type and severity of cases treated. The model includes complication indices for six patient groups: major surgery, minor surgery, cardiology, endoscopy, medical patients and all patients. Pediatrics and obstetrics are excluded. A favorable value is one that is below the median.

3. Severity-adjusted average length of stay. A lower severity-adjusted length of stay indicates more efficient consumption of hospital resources and reduced risk to patients. Adjustments are made using the refined Diagnostic Related Group (DRG) methodology. The DRG system is a patient classification scheme which provides a means of relating the type of patient a hospital treats to the costs incurred by the hospital, and provides a framework for Medicare's hospital reimbursement system. This Federally mandated program requires that cases are classified in terms of medical complexity and

includes the principal diagnosis, secondary diagnoses, surgical procedures, age, sex and discharge status. The relative severity and complexity of the service classifies the case into categories. Medical cases and patients within each category are similar clinically and in terms of resource use, and reimbursement.

4. Expense per adjusted discharge, case mix and wage adjusted. Low values indicate lower costs and thus higher efficiency. The measure is calculated by dividing total operating expenses by the number of adjusted discharges, and measures the hospital's average cost of delivering care on a per-unit basis. Discharges are adjusted by multiplying the number of acute care discharges by a factor that inflates it to include inpatient acute care, inpatient non-acute care, and outpatient discharges. Case mix adjustments account for differences in complexity according to the Medicare case mix methodology, and wage adjustments account for geographic differences in cost of living according to the Health Care Financing Administration (HCFA) wage index.

5. Profitability (cash flow margin). This is the sum of net income, depreciation and interest expense divided by the sum of net patient revenue and total other non-patient income. A favorable value is above the median.

6. Proportion of outpatient revenue and index of total facility occupancy. Current year occupancy is the ratio of a hospital's average daily census (the number of inpatients that are occupying beds in a hospital at midnight on any given day) to the average number of beds the hospital has in service. A favorable score is above the median.

7. Productivity (total asset turnover ratio). This is the net patient revenue divided by total assets. It measures the amount of productivity a hospital achieves in relation to the assets it controls. A favorable score is above the median.

The Top 100 Hospitals National Benchmarks for Success 2000 report calculates the performance values for each hospital within each comparison group using the Medicare cost report and discharge data. Within the comparison groups, hospitals were ranked on the basis of their performance relative to other hospitals of their size. The hospitals with the best overall total ranking were selected as the 100 benchmarks. The 2000 report summarizes:

> Their median Medicare case mix indices were 14 percent higher than their peer hospitals, but their quality of care, as measured by mortality and complications, was on average 14 percent better than the rest of the country. If all hospitals performed at the level of the 100 Top benchmark hospitals, the annual number of complications could have been reduced by over 58,000 and the number of deaths by nearly 87,000.... If all U.S. acute care hospitals were to operate like the 100 Top Hospitals, inpatient expenses would decline by an aggregate $14 billion a year. (Solucient, 2001, p. 2)

The cash flow margin of the top performing hospitals is 7 percent higher than the median for their peer groups. The average discharge operating expense of the benchmark hospitals' rose by 1.7 percent and was 24 percent higher than their peer groups. The top benchmark hospitals salary and benefits expense rose $1,446 per full-time equivalent employee (FTE) versus an increase of $856 for their peers, reflecting that the 100 Top Hospitals are leading all other hospitals and paying a premium in salary increases for their employees (HCIA-Sachs, 2000, p. 4). Full Time Equivalent (FTE) is a term used to describe the number of employees scheduled as a percentage of a full-time or a forty hour work week. In summary, the 100 Top performing hospitals reported fewer patient care

complications and deaths for matched populations, compensated their employees at a higher salary and benefit rate, and realized better financial results than the hospitals which were not classified as a top performing hospital.

Organizational Psychology is the branch of psychology concerned with applying the methods and findings of psychology to the solution of organizational problems. Recently the domain of study has been criticized for its lack of relevance to business.

> .... our increasingly sophisticated study of individual differences has not been greeted with open arms by management because we have failed to reveal for management a direct link between these differences and differences in organizational behavior and organizational effectiveness referred to collectively as organizational performance. The lack of clarity in the link between individual differences and organizational performance is...a consequence of the disparity between researchers' focus on individual-level criteria and managers' focus on organizational behavior and organizational productivity....we have implicitly abandoned the understanding of organizational behavior and effectiveness to situationists – to those who focus on organizational attributes such as job design, organizational structure, sociotechnical systems and reengineering as the factors responsible for organizational performance, thereby denying the importance of individuals to organizational performance (Schneider, 1996, p. 549-550).

This study sought to reveal a link between the overall performance of the hospitals and the organizational and occupational commitment, and organizational identification of the Chief Executive Officers of hospitals. It considers organizational performance as the unit of measure. The study assumed that organizational performance is relevant to

business, and explored the relationship between organizational performance and CEO commitment to both occupation and the organization.

In summary the study asked whether benchmark hospital performance was linked to the occupational or organizational commitment, or the organizational identification of the Chief Executive Officers.

CHAPTER III

Method

A survey was mailed to two categories of hospital CEOs; the CEOs of top performing (benchmark) hospitals, and a random sample of CEOs of acute care hospitals who were not included in the top performing (benchmark) hospital groups. The non-benchmark sample was stratified by bed size and was chosen randomly from the American Hospital Association Guide 2001-2002 Edition for United States Hospitals, Healthcare Systems, Networks, Alliances Directory of Acute Care Hospitals to reflect the composition of the bed size of the hospitals named in the benchmark studies.

The survey was comprised of standardized scales as well as demographic items. The mailings included an initial letter of invitation to participate in the survey addressed to the hospital CEO, the survey, and two follow-up notes. The communication to the CEOs is included in Appendix G.

Participants

A total of 1823 CEOs were invited to participate in the survey. Three hundred eighty-five CEOs were from the most recent top Hospitals Benchmarks for Success reports, specifically, the 100 Top Hospitals National Benchmarks for Success; 100 Top Hospitals, ICU Benchmarks for Success; 100 Top Hospitals Cardiovascular Benchmarks for Success; 100 Top Hospitals, Orthopedic Benchmarks for Success; and 100 Top Hospitals, Stroke Benchmarks for Success.

Surveys were mailed to CEOs of 1438 non-benchmark hospitals. The non-benchmark hospital sample was stratified by bed size (small hospitals 25-99 licensed

beds, medium size hospitals 100-249 licensed beds, large hospitals are hospitals with over 250 licensed beds) and was chosen randomly from the American Hospital Association Guide 2001-2002 Edition for United States Hospitals, Healthcare Systems, Networks, Alliances Directory of Acute Care Hospitals

The AHA Guide is published annually and lists all acute care hospitals in the United States that have been accredited by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) or are certified as a provider of acute services whose primary function is to provide diagnostic and therapeutic patient services under Title 18 of the Social Security Act, and licensed as a hospital by the appropriate state agency.

Hospitals smaller than 25 beds were excluded from the sample, as were Specialty hospitals, i.e. children's hospitals, rehabilitation hospitals, mental health inpatient facilities and Veteran's hospitals in order to replicate the hospitals included and ranked the top 100 Hospitals Benchmarks for Success reports (HCIA, 1999, 2000; Solucient, 2001a, 2001b; 2001c; 2001d). Small hospitals represented 43% of the sample (or 618 facilities), 36% of the sample was comprised of medium size hospitals (or 518 facilities), 8% of the sample were large community hospitals (or 129 hospitals), and 12%, teaching hospitals (or 144 hospitals). Respondents also indicated the type of hospital and whether their hospital was classified as a not-for profit, or a for profit business.

The Survey sample size assumed a 15% response rate to ensure a statistical power of .80, a medium effect of omega squared of .06 and an alpha of .05 (Cohen, 1988). A descriptive table of the hospital categories and CEO sample size for each category is presented in Table 1.

Table 1: Summary of CEO Survey Categories

Description	Sample Size
Benchmark hospitals	Benchmark CEOs (n=385). Some hospitals were recognized in more than one category.
100 Top Hospitals National Benchmarks for Success	
100 Top Hospitals Cardiovascular Benchmarks for Success	
100 Top Hospitals Orthopedic Benchmarks for Success	
100 Top Hospitals Stroke Benchmarks for Success	
100 Top Hospitals ICU Benchmarks for Success	
Non-benchmark hospitals	
Stratified sample included:	Non-benchmark hospital CEOs (n= 1438).
516 small hospitals (25-99 licensed beds)	
444 medium size hospitals (100-249 licensed beds)	
96 large community hospitals (≥ 250 licensed beds)	
144 teaching hospitals	

Measures

Both organizational commitment and occupational commitment scales were included in the survey because both have been shown to contribute independently to other organizational-relevant outcome variables (Allen & Meyer 1993; Lee, Carswell, & Allen, 2000; Meyer & Allen, 1997).

Organizational commitment was measured by the 18-item three-component measure of organizational commitment (Meyer & Allen, 1993, 1997). The instrument has been demonstrated to be psychometrically sound (Cohen, 1996; Ko, Price, & Mueller, 1997; Lee et al., 2000; Meyer & Allen, 1997), to differentiate between organizational commitment and occupational commitment, and to measure all three components of commitment (i.e., normative, affective and continuance commitment). Studies which reviewed the correlations of the three scales with the Organizational Commitment Questionnaire (OCQ) reported that the scale yielded correlations of .71 to .89 for affective commitment, .34 to .54 for normative commitment and -.01 to .28 for

continuance commitment. The median reliabilities for the Affective Commitment, Continuance Commitment and Normative Commitment Scales are .85, .79, and 73. With few exceptions, reliability estimates have exceeded .70 in published studies using these scales (Allen & Meyer, 1996; Cohen, 1996; Irving, Coleman, & Cooper, 1997; Meyer & Allen 1997).

Occupational commitment was measured by the Meyer and Allen (1991, 1993) three-component measure of occupational commitment. The scales reflect psychometric properties consistent with the three-component measure of organizational commitment also developed by Meyer and Allen (1993).

The items on both the organizational and occupational commitment scales are responded to on a 7-point scale ranging from strongly disagree (1) to strongly agree (7).

Organizational identification was measured by the 5-item measure developed by Mael (Mael, 1988; Mael & Ashforth, 1995). The participants were asked to respond on a 5-point scale ranging from strongly disagree (1) to strongly agree (5). The Organizational Identity Scale (OID) has not been tested as long or as extensively as the three-component measures of commitment by Meyer and Allen. However, reliability (Coefficient Alpha) for the OID measure has been reported within the range of .74 to .80 (Mael, 1988; Mael & Ashforth, 1992, 1995).

The survey questions are presented in Appendix H.

Analysis

Data collected from this study were analyzed using the Statistical Package for the Social Sciences (SPSS) for Windows. Frequency histograms were produced for each

demographic item and for the total scores on the Meyer and Allen Three Component measure of organizational commitment, The Meyer and Allen Three Component measure of occupational commitment, and the organizational identity questionnaire (OID). An alpha level of .05 was used for all statistical analysis.

Histograms for the demographic items (e.g., years the respondents have been a hospital CEO, the years they have been a CEO at their current hospital, hospital size, gender of CEO, and type of hospital), are presented in Appendices L-R.

CHAPTER 4

Results

A total of 1823 surveys were distributed to hospital CEOs between July - September, 2002. A total of 322 respondents replied to the survey representing an overall return rate of 17.7%. Twenty-three percent (or 89) of the CEOs from the 385 benchmark hospitals responded to the survey. A total of 233 Non-Benchmark hospital CEOs responded (16% of 1438 invited to participate.) Male respondents out-numbered female respondents (86% were male, 11.2% were female). A demographic summary of the profile of the respondents by gender is resented in Table 2.

Table 2 Demographic Summary of Respondents by Gender

Demographic Variable		Male	Female	Unknown	Total
Number of Hospitals overseen:	1	201	32		233
	2	37	3		40
	3	40	1		41
	total	278	36	8	322
Bed Size of Hospital:	25-99 beds	73	14		87
	100-250 beds	74	12		86
	over 250 beds	128	10		138
	total	275	36	11	322
Facility Tenure	Less than one year	9	4		13
	Since 2001	18	4		22
	Since 2000	42	2		44
	Since 1999	26	3		29
	Since 1998	29	4		33
	More than 5 years	153	19		172
	Total	277	36	9	322
Years a Hospital CEO:	Less than 1 year	2	2		4
	1-5 years	52	14		66
	6-10 years	46	7		53
	More than 10 years	177	13		190
	total	277	36	9	322

Descriptive statistics were calculated for each demographic variable. An overall demographic profile of the respondents is presented Table 3.

Table 3 Demographic characteristics of the sample

		Frequency
Gender	Male	278
	Female	36
	Missing	8
	subtotal	322
Hospital recognized as a l benchmark 2000*		
	Yes	93
	No	220
	Missing	9
	subtotal	322
Hospital recognized as a benchmark 2001*		
	Yes	70
	No	237
	Missing	15
	subtotal	322
Bed size of Hospital		
	Small (25-99 beds)	89
	Medium (100-249 beds)	87
	Large (250 beds	138
	Missing	8
	subtotal	322
Hospital type		
	Not-for profit facility	265
	Other	49
	Missing	11
	subtotal	322
Years a CEO at this facility (Facility tenure)		
	less than 1 year	13
	since 2001(1 year)	22
	since 2000 (2 years)	44
	since 1999 (3 years)	29
	since 1998 (4 years)	33
	5 years or more	172
	Missing	9
	Subtotal	322
Number of Years a CEO overall (Occupational tenure)		
	Less than 1 year	
	1-5 years	4
	6-10 years	66
	More than 10 years	53
	Missing	190
	subtotal	9
		322

Note: *.See Appendix H: Communication to CEOs for description of benchmark.

Preliminary Analysis

Several preliminary analyses were conducted prior to hypothesis testing. The data were examined for accuracy and missing values. Two types of missing data were identified; missing *unit* data in which respondents answered either some or only the demographic questions and did not reply to any of the survey questions, and missing *item* data in which answers to the scale items were absent. Thirty-two (32) respondents replied to the demographic items but did not reply to any of the commitment or identification scale items. The number of missing units varied by the demographic item. Missing item data represented less than 11% of the total survey item responses in the scales.

Several methods were evaluated for addressing missing item data including regression, item mean substitution (IMS) and person mean substitution (PMS). Roth (1994) cited Monte Carlo studies demonstrating little difference in the parameter estimates and internal consistency measures when less than 10% of the data are missing. Roth recommended the PMS technique for managing item level missing data because it is robust to average inter-item correlations. Roth, Switzer and Switzer (1999) suggested that with the exception of listwise deletion the various missing data techniques produce small differences when the amount of missing item data is small.

King, Fogg and Downey (1998) recommended the PMS technique as an appropriate method for imputing missing item data for small samples (under 200 respondents). They compared the two methods of mean substitution for data missing at the item level on scales measuring organizational commitment and job satisfaction with four separate sample sizes (N=50, 100, 150 and 200). They compared scale means, standard deviations, correlations and reliabilities of the original data after using both

methods to replace missing item data and concluded PMS was an appropriate technique when the percentage of missing items does not exceed 30%, and no more than 20% of the respondents are missing items. They noted that the approach tended to inflate reliability coefficients and standard deviations slightly. When 25% of the respondents omitted 50% of the items reliability estimates were increased by .02 on the organizational commitment scale. King et al., concluded that the PMS technique for estimating a response for an omitted item in an attitude scale more closely reflected the true score of the respondent than IMS. They explained attitudinal scales generally consist of multiple items that are highly interrelated and the items are included on the scale specifically because of their relationship to a specific construct (e.g., commitment, satisfaction, self-efficacy). Estimating a person's response for an omitted item within the scale is important because otherwise the overall scale score (variable) may not reflect the true nature of the respondent's score.

The PMS technique was used to impute missing item data in this study when the respondent answered more than half of the items (at least 4 items) of the 6 item commitment scalea, and at least 3 items of the 5 item organizational identification scale. If the respondent failed to answer at least 4 items within the scale, the respondent's total response was excluded from the analysis. This technique reduced the total number of cases to 287 or 288 per scale (organizational and occupational commitment scales each had between 34 and 35 missing cases, organizational identification. had 34 missing cases).

Additional variables were created to distinguish between the benchmark and non-benchmark CEOs reasoning that a minimum length of tenure at the hospital was

necessary in order for the CEO to impact the hospital's performance. Three non-independent groups were created to differentiate the CEOs by facility tenure and benchmark status. The category of Senior CEO represented hospital CEOs whose facility tenure was 5 years or longer (Since 1997 or before). Two groups were created for CEOs whose hospital tenure was more than 4 years (since 1998) and distinguished between CEOs whose hospital was named as a benchmark hospital more than once and those who were not. Table 4 describes the CEOs by hospital benchmark category and tenure.

Table 4 CEO tenure and Benchmark status

Description	Benchmark Hospitals	Non-Benchmark Hospitals	Total
Senior CEO CEO with facility tenure since 1997. (Benchmark means that hospital was named a benchmark hospital in at least one category.)	n = 48	n= 102	n=150
Dual CEO CEO facility tenure began in 1998. (Benchmark means hospital was named as a benchmark hospital in more than one category.)	n=30	n=154	n=184
Top CEO CEOs whose facility tenure began in 1998. (Benchmark means hospital was named as a benchmark hospital in one category.)	n=59	n=125	n=184

The largest number of survey respondents was from large hospitals (hospitals with 250 beds or more). However, the largest number of non-benchmark CEOs replied from small sized hospitals (25-99 beds) and the largest number of CEOs from benchmark

facilities replied from large hospitals. A summary of the respondents categorized by bed size and benchmark status is presented in Table 5.

Table 5 Distribution of CEOs by benchmark status and hospital bedsize

Hospital Bed Size	Benchmark CEO	Non-Benchmark CEO	Missing	Total
25-99 beds	6	82		88
100-249 beds	11	75		86
250+ beds	64	73		137
unknown			11	11
Total	81	230	11	322

Descriptives were calculated for each scale. Small standard mean differences were noted. Cohen's *d* revealed small effect sizes for the scores of benchmark CEOs from benchmark facilities and those representing non-benchmark hospitals on all scales. Cohen (1988) defined effect sizes as "small, *d*=. 2, medium d=. 5 and large d= .8" (p.25).

A summary of means, standard deviations and effect sizes for the scale score of CEOs from benchmark and non-benchmark hospitals for CEOs whose facility tenure is ≥5 years, and those whose facility tenure began in 1998 (Dual CEO and Top CEOs). Small but significant differences were noted on scores for CEOs whose facility tenure was 5 years or longer in the organizational commitment-continuance scale, organizational commitment normative scale, occupational commitment normative scale and organizational identification scale. The benchmark hospital CEOs indicated higher scores on the continuance commitment scale (a recognition associated with the costs of leaving) and the organizational normative scale (a feeling of obligation to remain) with both the organization and the occupations than the non-benchmark hospital CEOs. A comparison of the CEO scores on commitment and identification subscales is presented in Table 6.

Table 6
CEO tenure and performance scale comparison: means, standard deviations, t, effect size

	Senior CEO (≥5 years facility tenure) Benchmark (n-48) Non-Benchmark(n=102)					
	Mean	SD	Mean	SD	t	*d*
Org Commitment-Affective	6.5	.7	6.3	.8	1.2	.2
Org Commitment-Continuance	3.7	1.0	4.1	1.1	1.7*	.4
Org Commitment-Normative	5.6	1.0	5.2	1.2	2.2*	.4
Occ Commitment-Affective	6.3	.7	6.2	.7	1.1	.1
Occ Commitment-Continuance	4.5	1.5	4.8	1.2	1.3	.2
Occ Commitment-Normative	4.1	1.3	3.6	1.4	2.0*	.4
Organizational Identification	4.5	.5	4.7	.4	1.9*	.4
Variable	DualCEO since 1998 Benchmark(n=30) Non-Benchmark (n=154)					
	Mean	SD	Mean	SD	t	*d*
Org Commitment- Affective	6.4	.7	6.2	1.0	1.2	.2
Org Commitment - Continuance	3.8	1.0	3.9	1.1	.5	.1
Org Commitment - Normative	5.5	1.1	5.3	1.2	1.1	.2
Occ Commitment - Affective	6.2	.8	6.1	.8	.4	.1
Occ Commitment - Continuance	4.5	1.5	4.7	1.3	.5	.2
Occ Commitment - Normative	3.9	1.2	3.6	1.4	1.2	.2
Organization Identification	4.6	.5	4.7	.5	.1	.2
Variable	TopCEO since 1998 Benchmark (n=59) Non-Benchmark (n-125)					
	Mean	SD	Mean	SD	t	*d*
Org Commitment- Affective	6.3	.9	6.3	.8	.1	.0
Org Commitment - Continuance	3.8	1.0	4.1	1.0	1.7	.3
Org Commitment - Normative	5.4	1.1	5.2	1.2	1.1	.2
Occ Commitment - Affective	6.3	.7	6.2	.7	.9	.1
Occ Commitment - Continuance	4.6	1.4	4.9	1.2	1.4	.2
Occ Commitment - Normative	3.9	1.3	3.7	1.4	1.3	.2
Organizational Identification	4.6	.5	4.7	.4	1.6	.2

Note: Senior CEO facility tenure more than 5 years and hospital named as a Benchmark for both years. Dual CEO: hospital tenure since 1998, and hospital named as a Benchmark for both years. TopCEO hospital tenure since 1998 and hospital named as a Benchmark for either year. *$p \leq .05$ (two-tail).

Simple correlations between organizational commitment, occupational commitment and organizational identification scales are presented in Table 7. Moderate significant correlations were found between the organizational commitment affective

scale and organizational commitment normative scales r =. 54, followed by the correlation between organizational and occupational continuance scales r =.47; and the organizational normative and occupational normative scales r = .44 . Small but significant correlations were found between all scales except the organizational commitment affective scale and occupational commitment continuance scale; and the organizational commitment continuance scale and occupational commitment affective scale.

Table 7
Correlation table commitment, and organizational identification scales.

Scales	Mean	SD	Alpha	1	2	3	4	5	6	7
1	6.18	.94	.73	1						
2	3.93	1.04	.60	.14*	1					
3	5.32	1.16	.80	.54**	.32**	1				
4	6.14	.82	.74	.25**	.04	.21**	1			
5	4.63	1.31	.83	.06	.47**	.15**	.18**	1		
6	3.68	1.41	.86	.26**	.24**	.44**	.39**	.27**	1	
7	4.58	.48	.71	.27**	.23**	.28**	.29**	.28**	.18**	1

Note:n = 287-288 respondents. 1: organizational commitment-affective scale, 2: organizational commitment-continuance scale, 3: organizational commitment-normative scale, 4: occupational commitment-affective scale, 5: occupational commitment-continuance scale, 6: occupational commitment-normative scale, 7: organizational identification. *$p \leq .05$ (1-tailed). ** $p \leq .01$ (1-tailed).

A summary of item level responses was produced to compare item level scores of the Senior CEOs (those with more than 5 years of hospital tenure) from the benchmark and non-benchmark hospitals. The items with the lowest scores for both the benchmark and non-benchmark CEOs (moderate disagreement) were contained in the organizational

commitment-continuance scale: item 5. *One of the major reasons I continue to work for this organization is that leaving would require considerable personal sacrifice; another organization may not match the overall benefits I have here.* Item 6. *If I had not already put so much of myself into this organization, I might consider working elsewhere.*

In most instances, the mean difference in the item level mean scores for the Benchmark and Non-benchmark Senior CEOs varied by less than .5. Six item scores reflected more than a .5 difference. Organizational commitment – normative scale item 1: *I do not feel any obligation to remain with my current employer.* Item 2: *Even if it were to my advantage, I do not feel it would be right to leave my organization now.* Item 3: *I would feel guilty if I left my organization now.* Occupational commitment- affective scale item 6: *I am enthusiastic about hospital administration.* Occupational commitment normative scale item 1: *I believe people who have been trained in a profession have a responsibility to stay in that profession for a reasonable period of time.* Item 2: *I do not feel any obligation to remain in the hospital administration profession.* The item that both the benchmark and non-benchmark hospital CEOs most strongly agreed with was the organizational identification scale item 3: *When I talk about the hospital, I usually say "we" rather than "they".*

Five items had identical score responses for both the benchmark and non-benchmark CEOs: organizational commitment-affective scale item 3: *I do not feel like "part of the family" at my organization* (score 6.5 on a 7 point scale). Item 6: *I do not feel a strong sense of belonging to my organization* (score 6.4 on a 7 point scale). Organizational commitment-continuance scale item 1: *It would be very hard for me to leave my organization right now even if I wanted to* (item score 5.7 on a 7 point scale).

Occupational commitment continuance scale item 4: *It would be costly for me to change my profession now* (score 4.9 on a 7 point scale); and organizational identification scale item 1: *When someone criticizes this hospital it feels like a personal insult* (score 4.5 on a 5 point scale). Table 8 presents the means and standard deviations for all responses for the Senior CEO scores on the commitment and identification scale items.

The pattern of scores may reflect a ceiling effect in the scales. The commitment scales were scored on a 7-point scale. The mode for organizational commitment affective scale was 7 on a 7 point scale, and the median 6.5, The mode for occupational commitment affective scale was 6.8, and the median 6.33. The mode score for organizational identification was 5 on a 5-point scale, and the median score was 4.6.

Normality was evaluated by examining the symmetry and shape of the distribution. When a distribution is normal, the values of the skewness of the distribution (symmetry) and the kurtosis (peakedness) are zero (Tabachnick & Fidell, 2001 p.73). Skewness and peakedness was noted for three scales; organization identification scale skewness –2.31; kurtosis -.591; organization commitment affective scale skewness 1.6, kurtosis 2.5; and occupational commitment-affective scale skewness –1.5, kurtosis 2.7. The remaining scales were reasonably well distributed. Organizational commitment continuance scale skewness -.11, kurtosis -.3; organizational commitment normative scale skewness -. 60, kurtosis -.21 , occupational commitment continuance scale, skewness -.42, kurtosis -.45; occupational commitment normative scale skewness.19, and kurtosis -.59.

Table 8
CEOs Means and Standard Deviations for item level scores

	Senior CEO Benchmark (N=48		Senior CEO NonBnchmark (N=102)	
Organizational Commitment Affective Scale Items	M	SD	M	SD
1. I would be very happy to spend the rest of my career with this organization.	6.1	1.7	5.9	1.6
2. I really feel as if this organization's problems are my own.	6.3	1.3	6.0	1.6
3. I do not feel like "part of the family" at my organization. (R).	6.5	1.3	6.5	1.2
4. I do not feel "emotionally attached" to this organization. (R)	6.6	1.1	6.8	.4
5. This organization has a great deal of personal meaning for me.	6.9	.6	6.6	1.0
6. I do not feel a strong sense of belonging to my organization. (R)	6.4	1.3	6.4	1.3
Organizational Commitment-Continuance Scale Items				
1. It would be very hard for me to leave my organization right now even if I wanted to.	5.7	1.6	5.7	1.6
2. Too much in my life would be disrupted if I decided I wanted to leave my organization right now.	4.9	1.8	5.1	1.8
3. Right now, staying with my organization is a matter of necessity as much as desire.	3.3	1.9	3.8	1.9
4. One of the few negative consequences of leaving this organization would be the scarcity of available alternatives.	3.0	2.0	3.4	1.9
5. One of the major reasons I continue to work for this organization is that leaving would require considerable personal sacrifice; another organization may not match the overall benefits I have here.	2.9	2.0	3.1	1.8
6 If I had not already put so much of myself into this organization, I might consider working elsewhere.	2.9	1.8	3.4	1.8
Organizational Commitment Normative Scale Items				
1 I do not feel any obligation to remain with my current employer. (R)	5.9	1.4	5.3	1.8
2. Even if it were to my advantage, I do not feel it would be right to leave my organization now.	5.0	1.9	4.3	2.0
3. I would feel guilty if I left my organization now	4.9	1.7	4.2	2.1
4. This organization deserves my loyalty.	6.1	1.2	6.2	1.1
5. I would not leave my organization right now because I have a sense of obligation to the people in it.	6.2	1.2	5.5	1.6
6. I owe a great deal to my organization.	5.9	1.4	5.7	1.4
Occupational Commitment Affective Scale Items				
1. Being a hospital administrator is important to my self-image.	5.3	1.8	5.1	1.6
2. I regret having entered the hospital administration profession. (R)	6.7	.8	6.3	1.2
3. I am proud to be in the hospital administration profession.	6.8	.4	6.7	.7
4. I dislike being a hospital administrator.(R)	6.6	.5	6.5	1.1
5. I do not identify with the hospital administration profession.(R)	6.4	1.3	6.3	1.2
6. I am enthusiastic about hospital administration.	6.2	1.3	5.3	.9

	SeniorCEO Benchmark (n=48)		Senior CEO NonBenchmark (n=102)	
	Mean	SD	Mean	SD
Occupational Commitment Continuance Scale Items				
1. I have put too much into the hospital administration profession to consider changing now.	4.8	2.1	5.1	1.9
2. Changing professions now would be difficult for me to do.	4.8	2.1	5.2	1.8
3. Too much of my life would be disrupted if I were to change my profession.	4.4	2.0	4.8	1.7
4. It would be costly for me to change my profession now.	4.9	1.5	4.9	1.5
5. There are no pressures to keep me from changing professions. (R)	3.8	1.8	4.2	1.8
6 Changing professions now would require considerable personal sacrifice.	4.7	1.8	4.8	1.7
Occupational Commitment Normative Scale Items				
1. I believe people who have been trained in a profession have a responsibility to stay in that profession for a reasonable period of time.	4.2	1.9	3.5	1.8
2. I do not feel any obligation to remain in the hospital administration profession. (R)	4.6	1.8	3.8	1.8
3. I feel a responsibility to the hospital administration profession to continue in it.	4.6	1.6	4.0	1.7
4. Even if it were to my advantage, I do not feel that it would be right to leave hospital administration now.	4.0	1.9	3.5	1.8
5. I would feel guilty if I left hospital administration.	3.2	1.7	3.1	1.7
6. I am in Hospital Administration because of a sense of loyalty to it.	4.1	1.8	3.8	1.7
Organizational Identification Scale Items				
1. When someone criticizes this hospital, it feels like a personal insult.	4.5	.9	4.5	.9
2. I am very interested in what others think about the hospital.	4.8	.4	5.0	.3
3 When I talk about the hospital, I usually say "we" rather than "they."	4.9	.4	5.0	.2
4 This hospital's successes are my successes.	4.4	.8	4.5	.8
5. When someone praises the hospital it feels like a personal compliment	4.2	1.0	4.4	.6

Note. Commitment Scale item maximum score = 7. Responses were made on a 7 point scale (1= strongly disagree, 2= moderately disagree, 3= slightly disagree, 4= neither agree nor disagree, 5= slightly agree, 6= Moderately agree, and 7= strongly agree. Organizational Identification Scale item maximum score = 5. Responses were made on a 5 point scale (1= strongly disagree and 5= strongly agree).

[a] Senior CEO: CEO facility tenure 5 years or more, and hospitals were included at least once in any hospital Benchmark category. [b] Non-Benchmark CEO, facility tenure 5 years or more, but hospital was not listed as a Benchmark performer in any category.

Tabachnick and Fidell (2001) wrote that a variable with significant skewness often does not deviate enough from normality to make a substantive difference in the analysis when the sample is large, "overestimates of variance associated with positive kurtosis disappear with samples of 100 or more cases, with negative kurtosis, underestimation of variance disappears with samples of 200" (p.78-79). The number of cases in this sample was 287 –288 (varied by scale because of missing data). Frequency histograms of the scales are presented in Appendices I-R.

Hypothesis Testing

Hypothesis 1 predicted a positive relationship between organizational performance and CEO commitment. CEO responses to the Meyer and Allen Three Component measure of organization commitment were quantified and assessed. Three groups of Benchmark CEOs were tested, Senior CEOs whose facility tenure was over 5 years, Dual CEOs whose facility tenure began in 1998 and whose hospital was named as a top performing (Benchmark) facility in any category both years, and Top CEOs whose tenure began in 1998 and whose hospital was named as a top performing Benchmark facility in any category for either year.

A t-test for independent samples was performed. In this analysis, the responses from the CEOs from the Benchmark hospitals were evaluated to determine if there were significant differences between their mean scores and the CEOs from Non-Benchmark hospitals The differences in the mean scores on the scales were small. The t-tests yielded small but significant differences between the benchmark hospital Senior CEOs on the continuance and normative scales $p \leq .05$. The results of the t- tests, and the effect size

are included with the Means and Standards Deviations for the Scales and presented in Table 6.

Hypothesis 2

The second hypothesis predicted a higher level of Occupational commitment for CEOs from the Benchmark hospitals than Non-Benchmark Hospital CEOs. Three non-independent groups of Benchmark CEOs SeniorCEOs, Dual CEOs, and Top CEOs were examined and evaluated with t-tests. The t-tests yielded no significant differences between the means of the Dual and TopCEO groups $p \geq .05$. The difference in the mean scale scores between the Benchmark CEOs and the Non-benchmark CEOs was extremely small for all three CEO groups. However, a small but significant difference was found in the scores of the SeniorCEOs on the occupational commitment normative scale $p \leq .05$. The t-test results contrasting the scores of Benchmark hospital CEOs with Non-Benchmark hospital CEOs on the occupational commitment scales are presented in Table 6.

Hypothesis 3

The third hypothesis predicted a higher level of organizational identification for top benchmark hospital CEOs than CEOs of non-benchmark hospitals. As in Hypothesis 1 and 2, the three groups of CEOs were Senior CEOs, DualCEOs, and Top CEOs. The difference between the mean scores of the CEO groups was very small. A t-test for independent samples was performed; the two groups were compared on the dependent variable of organizational identification. The t-test yielded no significant differences in either the Dual CEO or the TopCEO groups. However, a small but significant difference

was found in the Senior CEO group (when the CEO facility tenure was at least 5 years) $p \leq .05$ The t-test results are presented in Table 6.

Hypothesis 4

The fourth hypothesis predicted that the Meyer and Allen Three Component Measures of organization and occupational commitment and the organizational identification instrument measure different constructs. The factor structure of the organizational commitment measure has been evaluated and researchers have reported that affective, normative and continuance commitment load on separate factors (Allen & Meyer, 1996). Meyer, Allen and Smith (1993) noted that the components of commitment to occupations and organizations are not independent. To determine if the commitment and identification scales measured distinct constructs a factor analysis was performed. There were a total of 41 variables (scale items) for a sample of 285 CEOs. The proportion of cases per variable item was relatively low (6.9 cases per variable).

A principal components analysis with orthogonal (varimax) rotation was performed to maximize the variance between the organization commitment scales, the occupational commitment scales and the organizational identification scale. The factors with eigenvalues one or greater were rotated. The aim was to discover which items in the set formed subsets that were independent of one another. Each of the commitment scales comprised six items; the organizational identification scale contained 5 items.

A cut off score of .4 was used for inclusion of an item in the interpretation of component, 4 of the 41 items did not load on any factor. Organizational identification items did not load on any components with the commitment items, instead the items were split between several components. According to Tabachnick and Fidell (2001) loadings

of .6 and above are usually considered "high". Most of the loadings on the components met those criteria and were high. However two components, 9 and 10, contained only two items. The occupational commitment scales revealed the most complete and consistent component loadings. Variables were moderately well-defined for this 10 component solution. The proportion of total variance in all of the variables accounted for with the 10 components solution is 62.85%. Organizational commitment, occupational commitment and organizational identification were somewhat differentiated between the items on the scales. Comrey and Lee (1992) recommend as a guideline sample sizes of 100 as poor, 200 as fair, 300 as good, 500 as very good and 1000 as excellent. Tabachnick and Fidell (2001) recommended at least 300 cases for factor analysis. The component structure in this case was possibly weakened by the number of respondents (287) and the relatively modest proportion of respondents to items.

Communality measures the percent of variance in a given variable explained by all the factors jointly, it is the proportion of the variance that is shared. Communality for a variable is computed as the sum of squared factor loadings for that variable. For full orthogonal principle components analysis, the communality will be 1.0 for all variables because all of the variance in the variables will be explained by all of the factors. The extracted communality is the percent of variance in a given variable explained by the factors that are extracted by the solution. The communalities for this analysis are presented in Appendix T. The component loadings for the 10 component solution are presented in Table 9.

A 7-factor analysis resulted in a fair solution explaining 54 % of the variance. A cut off score of .40 was used for inclusion of an item in the component. Organizational

Identification items did load on one component, but the commitment items were split among several components. The highest single loading was organizational commitment – continuance, Item 3 (.90). The item: I do not feel like "part of the family" at this organization (R), followed by organizational commitment-affective scale, Item 3 (.90); Right now staying with my organization is a matter of necessity as much as desire, and occupational commitment continuance scale, Item 4 (.85) There are no pressures to keep me from changing profession (R).

The organization commitment, occupational commitment and organizational identification scales are distinct. However the 7 component structure was possibly weakened by the number of respondents (287) and the modest proportion of respondents to items.

Some overlap between the commitment scales was noted. Items from the affective scale loaded with the continuance scale, and items from the continuance scale loaded with the normative scales. One item from the organizational identification scale loaded with occupational commitment normative scale in one component. However, none of the items on the commitment scales leaded with the organizational identification items. This finding supported Hypothesis 4 and demonstrates that the organizational identification scale is distinct from organizational commitment. The 7 Factor solution is presented in Table 10.

Hypothesis 5

The fifth hypothesis predicted a relationship between organizational performance, the organization and occupational commitment and organizational identification of the Chief Executive Officer of the hospital.

Table 9
Component Loadings: principal component A=analysis, varimax rotation with kaiser normalization.

	Component									
Scales	1	2	3	4	5	6	7	8	9	10
orgaff1			.67							
orgaff2			.42							
orgaff3						.91				
orgaff4			.50							
orgaff5			.54				.50			
orgaff6						.92				
orgcont1			.77							
orgcont2			.65							
orgcont3									.48	
orgcont4										
orgcont5										.50
orgcont6										.76
orgnorm1										
orgnorm2					.77					
orgnorm3					.77					
orgnorm4										
orgnorm5					.68					
orgnorm6			.63							
ocaff1				.30						
ocaff2				.67						
ocaff3				.65						
ocaff4				.74						
ocaff5				.69						
ocaff6				.69						
occont1		.63								
occont2		.79								
occont3		.87								
occont4		.33							.68	
occont5		.74								
occont6		.79								
ocnorm1	.68									
ocnorm2	.66									
ocnorm3	.80									
ocnorm4	.70									
ocnorm5	.77									
ocnorm6	.74									
orgid1								.53		
orgid2							.75			
orgid3							.81			
orgid4								.75		
orgid5								.81		

Table 10 Seven Factor Solution: Principal Component analysis, varimax rotation with Kaiser normalization

	Component						
Items	1	2	3	4	5	6	7
orgaff1	.65						
orgaff2	.43						
orgaff3							.90
orgaff4							.44
orgaff5	.51						
orgaff6							
orgcont1	.77						
Orgcont2	.64						
orgcont3					.61		.90
orgcont4					.76		
orgcont5					.75		
orgcont6					.55		
orgnorm1					.41		
orgnorm2	.64						
orgnorm3	.62						
orgnorm4	.61						
orgnorm5	.51						
orgnorm6	.66						
ocaff1	.56						
ocaff2							
ocaff3				.62			
ocaff4				.67			
ocaff5				.70			
ocaff6				.73			
occont1				.65			
occont2			.62				
occont3			.78				
occont4			.85				
occont5					.43		
occont6			.71				
ocnorm1			.79				
ocnorm2		.63					
ocnorm3		.63					
ocnorm4		.74					
ocnorm5		.74					
ocnorm6		.78					
orgid1		.74				.58	
orgid2						.68	
orgid3						.67	
orgid4						.63	
orgid5						.71	

A discriminate functional analysis was attempted to determine if any pattern of scores discriminated between the top performing hospitals and those who are not top performing hospitals. Seven continuous independent variables were specified: Affective, continuance and normative commitment to the organization, affective, continuance and normative commitment to the occupation, and Organizational Identification. The two categories are benchmark hospital CEOs, and non-benchmark hospital CEOs.

Discriminate function analysis attempts to find linear combinations of variables that best separate groups. The discriminant model assumes that the predictors are not highly correlated with each other, the mean and variance of a given predictor are not correlated, the correlation between two predictors is constant across groups (Tabachnick & Fidell, 2001).Wilks' lambda is a measure of how well each function separates cases into groups. It is equal to the proportion of the total variance in the discriminant scores not explained by differences among the groups. Smaller values of Wilks' Lambda indicate greater discriminatory ability of the function.

In this case, the result is large and not unexpected since as noted earlier this sample was not normally distributed within several of the scale variables. Table 11 presents the Wilks Lambda and Equality of Group means for this analysis.

Logistic Regression was implemented as an alternative to discriminate function analysis because it does not require normality (Tabachnick & Fidell (2001). Logistic regression allows the prediction of a discrete outcome from a set of variables that may be continuous, discrete dichotomous or a mix (Tabachnick & Fidell, 2001).

Table 11 Wilkes Lambda and Means for Discriminate Analysis

Equality of Group Means	Wilks' Lambda	F	df1	df2	Sig.
Organizational commitment/affective	1.00	.79	1	277	.38
Organizational commitment continuance	1.00	.00	1	277	.95
Organizational commitment normative	1.00	1.23	1	277	.27
Occupational commitment affective	1.00	.16	1	277	.69
Occupational commitment continuance	1.00	.04	1	277	.85
Occupational commitment normative	1.00	1.59	1	277	.21
Organizational identification	1.00	.72	1	277	.40
Test of Function		Chi-square	df	significance	
1	1.00	3.79	7	.81	

The calculation answers the same questions as discriminant function analysis however, the predictors (in this case the organizational commitment, occupational commitment, or organizational identification scales) are not required to meet the assumption of normality. The outcome variable is the probability of having one outcome based on the best linear combination of predictors. A direct logistic regression analysis was performed to determine if any predictor discriminated between the groups to predict the probability of benchmark status as an outcome of the 7 predictor variables (e.g., organizational commitment: affective, continuance and normative scales; occupational commitment: affective, continuance and normative scales, and organizational identification). A test of the full model with all predictors indicated a prediction success of 0% for benchmark CEOs, and 100% of the non-benchmark CEOs. Chi Square is not significant. Table 12 presents the classification table of the individual predictors.

Table 12 Classification Table

Unweighted Cases		N	Percent
Selected Cases	Included in Analysis	279	86.6
	Missing Cases	43	13.4
	Total	322	100.0
Omnibus Tests of Coefficients			
	Chi-square	df	Significance
Step	3.88	7	.80
Block	3.88	7	.80
Model	3.88	7	.80

Table 13 presents the logistic regression coefficient, Wald test and odds ratio for each of the predictors. Employing a .05 criterion of statistical significance, the predictors do not demonstrate that they can predict the outcome. X^2 (7, N 279) = .80, $p > .05$.

Table 13 Logistic regression coefficient, Wald test and odds ratio

	B	S.E.	Wald	df	Sig.	Exp(B)
ORGAFF	-.09	.19	.21	1	.65	.92
ORGCONT	.04	.16	.05	1	.82	1.04
ORGNOR	-.10	.16	.38	1	.54	.91
OCAFF_	-.02	.19	.01	1	.91	.98
OCCONT	.02	.13	.02	1	.90	1.01
OCNORM	-.10	.12	.73	1	.39	.90
ORGID	.37	.31	1.37	1	.24	1.44
Constant	.82	1.62	.26	1	.61	2.27

Note. entered on step 1: ORGAFF: Organizational Commitment-affective scale, ORGCONT: Organizational Commitment-continuance scale, ORGNOR: Organizational Commitment-normative scale, OCAFF: Occupational Commitment-affective scale, OCCONT: Occupational Commitment- continuance scale, OCNORM: Occupational Commitment-normative scale,ORGID: Organizational Identification (OID.

CHAPTER V

DISCUSSION

Purpose of the Study

The purpose of this exploratory study was to examine the relationship between organizational performance and CEO attachment. Specifically to examine the nexus of organizational performance and leader commitment to determine if top performing (benchmark) hospitals are led by CEOs with higher levels of either organizational commitment, occupational commitment or organizational identification than the CEOs of hospitals which were not classified as top performers (benchmarks).

A causal relationship between performance and commitment or performance and identification was not proposed recognizing that the converse could be the case, a publicly ranked high level of organizational performance could just as likely result in or lead to organizational commitment, occupational commitment and or organizational identification of the CEO.

In addition this study examined the relationship between the constructs of organizational commitment, occupational commitment and organizational identification by comparing scales that have been designed to measure those constructs.

A relationship between leadership commitment and benchmark organizational performance was not found unless the CEO's tenure exceeded 5 years. Salancik (1977) wrote that the more explicit and the more public and voluntarily an individual's behavior, the more committed the individual will be to sustaining their role and behavior. Salancik proposed that commitment is driven by a desire to remain psychologically

consistent. The role of a hospital CEO is a public role and five years of visibility in the role could contribute to the commitment levels that were reflected in this study. Bem 1972) and Hulin (1991) wrote that if in the absence of other information, an individual perceives himself/herself as freely and repeatedly engaged in an act or a series of acts that cannot be denied the individual will conclude that the acts or the consequences of the action are enjoyable or pleasing, and further, the individual will develop attitudes consistent with this positive interpretation of his/her past behavior.

Other than for those CEOs whose facility tenure was longer than 5 years, no significant differences were found between the CEOs that distinguished the top benchmark organizations from the non benchmark organizations. The results suggest that the longer the tenure of the CEOs, the higher the level of affective commitment becomes. The variance in the scores of the individual CEOs was very small leading to minimal detectable differences between the means on the scales. Others have reported the link between commitment and performance as weak. This study confirmed those previous conclusions

Moderate correlations ($r = .44$) between affective occupational and affective organizational commitment were reported by Mathieu and Zajac (1990). Lee, Carswell, and Allen (2000) reported a similar correlation ($r = .45$) between affective occupational commitment and affective organizational commitment. The correlation between the organization commitment affective scale and affective occupational commitment affective scale in this study was smaller, but still significant $r = .25, p \leq .01$. The highest correlations in this study were between the organization affective commitment and organization normative commitment scales $r = .54$, $p \leq .01$; between organization

commitment and occupational commitment continuance scales $r = .47$, $p \leq .01$; and organizational and occupational normative scales $r = .44$, $p \leq .01$.

Consistent positive correlations between affective and normative commitment have been noted in the past by Meyer, Allen and Smith (1993) and were explained in part by noting that the two components have common antecedents. Affective and normative commitment are generally associated with positive work experiences. Having positive experiences may lead one to develop an affective attachment, or a sense of obligation or both, to the entity associated with those experiences (an occupation or an organization). Correlations between the occupational and organization commitment scales although significant were modest. In short the CEOs as a group expressed a zeal and enthusiasm for their work, and expressed that they personally identified with their organization. The CEO's replies also suggested a belief that they would not have difficulty changing either occupations or organizations. In other words, while committed to their organization and their career, the CEOs did not express that they were obliged to continue with either and generally disagreed that changing professions or organizations would require sacrifice.

Unanticipated Findings

In the absence of any commitment data to the contrary, the individual responses of CEOs and the corresponding variances were expected to be normally distributed with score variances comparable to other groups who had completed the scales. The CEOs in this sample represented varying years of facility and professional tenure. In addition, the sample was drawn from hospitals that varied by size of the facility, the type of facility (for profit, not-for profit), and performance rank of the hospital. This group of

respondents differed from previous groups of respondents to the commitment and identification scales insofar as the participants were all CEOs and working at the highest level of management within their organizations. The small variance in the responses suggests homogeneity of the sample and the possibility that as the level of the position increases, the variance decreases on attitude scales.

Previously, the groups of individuals measured on the 6-item version of the Allen and Meyer (1990) and Meyer, Allen and Smith (1993) commitment scales have included licensed and unlicensed employees, MBA students, nursing students, aerospace engineers, and other technical workers. With the exception of the small variance in occupational affective commitment (.74) noted by Irving, Coleman and Cooper (1997) in a group of 20 Canadian employees classified as executive, financial and administrative, the variance in the CEO sample scores are smaller than other groups. As can be seen in the mean scores for both organization commitment, and occupational commitment-affective scale are higher than nurses, air traffic controllers and other technical workers. Table 14 summarizes the means and standard deviations from previous studies.

Job satisfaction and commitment are correlated in the literature (Mathieu & Farr, 1991; Munro, 2001; Ostroff, 1992). Robie, Ryan, Schmieder, Parra, and Smith (1998) studied the relationship between job level and job satisfaction and found that as job level increased job satisfaction increased. None of the 35 independent samples included in their meta-analysis specifically measured organizational commitment or included the top management of the organization.

Table 14
Summary means and standard deviations previous studies

Groups	OrgAff		OrgCont		OrgNorm		OccAff		OccCont		OccNorm	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Hospital CEOs N = 287	6.18	.94	3.93	1.04	5.32	1.16	6.15	.82	4.62	1.31	3.66	1.41
Student Nurses [a] N=662	5.57	1.16	3.84	1.41	3.37	1.19						
Registered Nurses [a] N=603	3.91	1.47	4.03	1.38	3.04	1.41	5.38	1.26	4.73	1.37	3.04	1.44
Executive Financial Admin [b] (N=20)							5.62	.074	4.48	1.50	3.44	1.47
Air Traffic Controllers [b] N=55							5.59	.83	5.22	1.22	3.43	1.28
Other Technical [b]							4.99	1.06				
Nurses [c]	4.30	1.70	4.50	1.20	3.90	1.20						
MBA Students [c] N=120	4.30	1.70	4.50	1.20	3.90	1.20						

Note. OrgAff – Organizational Commitment affective scale, OrgCont: Organizational Commitment-continuance scale; OrgNorm: Organizational Commitment—normative scale; OccAff: Occupational Commitment – affective scale; OccCont: Occupational Commitment – continuance scale; OccNorm: Occupational Commitment – normative scale. a: Meyer, Allen and Smith (1993) b: Irving, Coleman and Cooper (1997) and personal correspondence with G. Irvin. c: Jaros (1997).

The participants in the Robie et al. (1998) study were classified as blue-collar workers middle managers, and professional workers. Job level and job satisfaction correlated at a moderate level regardless of the organization. They reported that job satisfaction is influenced by challenging work with which the individual can cope successfully, personal interest in the work itself, work which is not too physically tiring, rewards for performance which are just and in line with personal aspirations and high self-esteem on the part of the employee. Robie et al. (1998) noted that range restriction of

job level may have influenced their findings in job satisfaction. They reasoned that as selected groups of respondents become smaller, they may become more homogenous due to the selection criteria. As individuals move up in the level of the organization (from line to leadership) job satisfaction increases (Robie et al., 1998). A similar relationship may exist between commitment and the job level within an organization. It is possible that the factors suggested by Robie et al. are influencing the CEOs within this study. The CEOs may be reporting higher levels of commitment than others who have been studied because of the selection criteria used for the position, their professional status, higher compensation, and the high visibility of their positions.

As noted in the literature review, Brickman (1987) explained that when positive elements dominate, the resulting commitment is characterized by an enthusiasm, or the sensation people experience when they act with total involvement in an activity. When the negative element dominates the commitment is characterized by a persistence to sustain the activity but without enthusiasm.

Podsakoff, MacKenzie and Bommer (1996) completed a meta-analysis evaluating the relationship between leadership, job attitudes and performance. They concluded individuals who value rewards in the organization are more likely to demonstrate higher levels of organizational commitment than those who do not value rewards. Perhaps there is correspondence between that finding and the finding in this study with salaries, benefits, perquisites and rewards also contributing to the high levels of organization and occupational commitment-affective scales.

Limitations of the study

This exploratory survey was purposely kept short in order to minimize the time that would be required of the CEO respondents to complete it. However additional questions about other links to organization performance would have been helpful. The survey occurred in the fall of 2002, while the Medicare cost reports upon which the top performing (benchmark) hospitals were based referenced 1998 and 1999 data, therefore there is a time gap and the attitudes and responses of CEOs in 2002 may or may not have been the same at the time of the survey as their responses would have been in the past.

The survey was limited to CEOs and was a self-report measure unaccompanied by either a social desirability scale, or a Self-Monitoring scale. The nearly identical responses provided by the CEOs on the scales may have reflected a reply designed to manage the image of the hospital, or their own image, rather than providing the actual opinions of the respondents. While the respondents were assured that their individual responses to the survey questions would not be linked to either their hospitals or their identity, the CEOs' replies may have been purposefully enthusiastic to protect themselves and their facility from a possible breach that could have been damaging to their image, the image of the facility, or otherwise professionally compromising. In other words, the CEOs may simply not have been comfortable answering questions that could have potentially placed them in a negative light.

Kilduff and Day (1994) found that high self-monitors tend to be more successful in managerial careers, than low-self monitors. Gangestad and Snyder (2000) proposed that high self- monitors control information relevant to inferences about themselves for others.

Impression management therefore, may include controls on the inferences that can be made about their attitudes by suppressing information that could be construed in a negative way by actively projecting favorable images. While assurances were made to the CEOs that their identity and information would be protected in this study, it is possible that the respondents replied in a way that would insure that others would not draw an unfavorable impression about them. The collective profile of the CEOs indicates they are highly committed to both their organizations and their careers, and they personally identify with their organization. They believe that they have other options for work but have chosen the place they are working. A negative impression would not be construed from this profile.

Due to resource limitations, the survey did not include multiple measures from within the organization. Future research expanded to include employees groups from all levels within the hospital would provide a more complete perspective about the commitment attitudes within the hospitals, and whether the overall commitment or identification of the CEO is shared by the employees of the organization. It would also be interesting to explore CEO attitudes from other industries and organizations to determine whether their profiles are similar to the hospital CEOs in this survey.

The survey did not distinguish the CEOs who ran more than one hospital and some of the hospitals were benchmark facilities and some were not. Twenty respondents with four years of facility tenure (Dual and TOP CEO groups) indicated that they had more than one facility and also indicated that their hospital had been classified as a benchmark hospital. Thirty of the CEO respondents whose facility tenure was ≥ 5 years were responsible for more than 1 hospital. The respondents merely indicated the number of

hospitals they were responsible for and if their hospital had been named. Therefore, it is not known how many of the CEOs who indicated they were responsible for more than one facility had both benchmark and non-benchmark hospitals.

Supplemental Analysis

Post hoc analyses of the data led to findings that were beyond the original focus of the study but may support prior research findings in the body of commitment research. Several independent sample t-tests explored the differences between the mean scores on the organizational commitment, occupational commitment and organizational identification scales with this sample for hospital tenure and professional CEO tenure. The means were evaluated at a one -tailed alpha of .05. CEOs whose hospital tenure was over 5 years demonstrated higher levels of organizational affective and normative commitment than the CEOs with less than 5 years in the hospital. The longer the facility tenure, the higher the level of both organization affective and organization normative commitment. Table 15 compares the means, standard deviations, t-test and effect sizes for the scales for CEOs with more than five years and less than 5 years of facility tenure.

Table 15 CEO Hospital Tenure comparison

Variable	Hospital tenure > 5 years n=172		Hospital tenure < 5 years n=144		t	*d*
	Mean	SD	Mean	SD		
Org Commitment- Affective	6.38	.772	5.95	1.04	4.0**	.47
Org Commitment - Continuance	3.98	1.05	3.83	1.06	1.18	.14
Org Commitment - Normative	5.34	1.17	5.29	1.19	.38	.05
Occ Commitment - Affective	6.24	.68	6.00	.97	2.42*	.29
Occ Commitment - Continuance	4.76	1.32	4.47	1.3	1.90	.23
Occ Commitment - Normative	3.78	1.37	3.56	1.44	1.30	.16
Org Identification	4.61	.42	4.55	.55	1.11	.13

* $p < .05$ ** $p < .01$

CEOs whose cumulative professional tenure as a CEO was over 10 years demonstrated higher levels of occupational affective and occupational continuance commitment than those with less than 10 years of experience. These findings are consistent with previous research completed by Meyer and Allen (1997). Table 16 presents findings for CEO occupational tenure on the scale level.

Table 16 CEO occupational tenure comparison

Variable	CEO Career Tenure >10 years		CEO Career Tenure < 10 years		t	*d*
	Mean	SD	Mean	SD		
Org Commitment- Affective	6.22	.92	6.10	.96	1.06	.13
Org Commitment - Continuance	3.91	1.03	3.95	1.07	-.33	-.03
Org Commitment - Normative	5.32	1.16	5.31	1.21	.04	.00
Occ Commitment - Affective	6.30	.65	5.87	.99	4.43**	.52
Occ Commitment - Continuance	4.82	1.30	4.39	1.28	2.74**	.33
Occ Commitment - Normative	3.80	1.43	3.54	1.35	1.56	.19
Org Identification	4.59	.44	4.57	.54	.32	.39

** $p<.01$

A correlation matrix was produced to explore correlations between all of the CEO demographic variables and the commitment and organizational identification scales. The highest correlations were found in facility tenure and bed size. CEO respondents tended to be from hospitals with more than 250 beds, and with a longer tenure. The CEO respondents with longer organizational tenure indicated higher scores on the organizational commitment-affective scale, and the CEO respondents with longer levels of occupational tenure indicated higher levels of occupational commitment and organizational identification suggesting that the length of time spent in the occupation and the organization is linked to higher levels of commitment. These findings are consistent with previous findings of Meyer and Allen (1997) who also reported occupation and organization tenure effects and proposed that the longer service is linked

to stronger attachment to occupation and is to a higher level of attachment to the organization.

The female respondents tended to have higher scores on the occupational commitment continuance scale than male respondents. Small to moderate significant correlations between gender and continuance commitment (remaining because of need) to both the occupation and to the organization were found. However, the level of continuance commitment to both the organization and the occupations was much lower than the level of affective and normative commitment. The correlations are presented in Appendix U.

Finally, a table summarizing the means and standard deviations of the item level responses for CEOs whose career tenure was more than 5 years and those whose tenure was less than 5 years was created. The comparison reflects some minor differences. Almost two thirds of the respondents had career tenure of more than 5 years. As a group the CEOs indicated they felt included in their organizations, were emotionally attached to their role, and that the organization has a great deal of personal meaning for them. In general, the longer the length of career tenure, the higher the level of organization and occupational commitment, and the higher the level of organizational identification. CEOs with longer career tenure indicated a higher degree of occupational continuance commitment than those whose career tenure was less than 5 years.

The highest item difference between the two groups was in the Occupational commitment-continuance scale: 'Too much of my life would be disrupted if I were to change my profession'. A comparison of the item responses by CEO career tenure follows in Table 17.

Table 17
Item means and standard deviations by CEO career tenure

	CEO Career tenure 5years or more n=215		CEO career tenure 5 years or less n=67	
Organizational Commitment Affective Scale Items	Mean	SD	Mean	SD
1. I would be very happy to spend the rest of my career with this organization. *	5.85	1.65	5.35	1.79
2. I really feel as if this organization's problems are my own. *	6.02	1.53	5.40	1.69
3. I do not feel like "part of the family" at my organization. (R).	6.24	1.53	6.35	1.28
4. I do not feel "emotionally attached" to this organization. (R)	6.48	1.23	6.29	1.34
5. This organization has a great deal of personal meaning for me.	6.56	1.07	6.32	1.16
6. I do not feel a strong sense of belonging to my organization. (R)	6.17	1.50	5.64	1.63
Organizational Commitment Continuance Scale Items				
1. It would be very hard for me to leave my organization right now, even if I wanted to. *	5.64	1.63	5.16	1.90
2. Too much in my life would be disrupted if I decided I wanted to leave my organization right now. *	5.00	1.78	4.55	1.94
3. Right now, staying with my organization is a matter of necessity as much as desire.	3.57	1.90	3.91	1.96
4. One of the few negative consequences of leaving this organization would be the scarcity of available alternatives.	3.19	1.86	3.25	1.78
5. One of the major reasons I continue to work for this organization is that leaving would require considerable personal sacrifice; another organization may not match the overall benefits I have here.	3.01	1.87	3.25	1.87
6. If I had not already put so much of myself into this organization, I might consider working elsewhere.	3.18	1.77	3.28	1.64
Organizational Commitment Normative Scale Items				
1 I do not feel any obligation to remain with my current employer. (R)	5.40	1.72	5.42	1.60
2 Even if it were to my advantage, I do not feel it would be right to leave my organization now.	4.55	2.00	4.88	1.84
3 I would feel guilty if I left my organization now	4.60	1.96	4.64	1.80
4 This organization deserves my loyalty.	6.03	1.32	5.73	1.37
5 I would not leave my organization right now because I have a sense of obligation to the people in it.	5.77	1.40	5.46	1.60
6. I owe a great deal to my organization.	5.56	1.51	5.52	1.42

	CEO Career tenure 5years or more n=215		CEO Career tenure 5 years Or less n=67	
	Mean	SD	Mean	SD
Occupational Affective Commitment				
1. Being a hospital administrator is important to my self-image.	5.20	1.59	4.66	1.68
2. I regret having entered the hospital administration profession (R).	6.42	1.15	6.15	1.23
3. I am proud to be in the hospital administration profession.	6.61	.87	6.05	1.46
4. I dislike being a hospital administrator (R).	6.50	1.05	6.31	1.19
5. I do not identify with the hospital administration profession (R).	6.39	1.14	5.78	1.71
6. I am enthusiastic about hospital administration.	6.25	1.15	5.91	1.45
Occupational Commitment Continuance Scale Items				
1. I have put too much into the hospital administration profession to consider changing now.	4.93	1.96	3.93	1.89
2 Changing professions now would be difficult for me to do.	5.03	1.85	4.32	1.86
3 Too much of my life would be disrupted if I were to change my profession.	4.70	1.84	3.93	1.76
4 It would be costly for me to change my profession now.	4.89	1.50	4.19	1.48
5 There are no pressures to keep me from changing professions. (R)	4.23	1.74	4.32	1.48
6 Changing professions now would require considerable personal sacrifice	4.90	1.64	4.52	1.70
Occupational Commitment Normative Scale Items				
1. I believe people who have been trained in a profession have a responsibility to stay in that profession for a reasonable period of time.	3.76	1.83	3.28	1.87
2. I do not feel any obligation to remain in the hospital administration profession. (R)	3.91	1.90	4.63	1.81
3. I feel a responsibility to the hospital administration profession to continue in it.	4.21	1.74	3.53	1.73
4 Even if it were to my advantage, I do not feel that it would be right to leave hospital administration now.	3.69	1.85	3.64	1.82
5. I would feel guilty if I leave hospital administration.	3.10	1.77	2.93	1.72
6. I am in Hospital Administration because of a sense of loyalty to it.	3.82	1.86	3.67	1.74
Organizational Identification Scale Items				
1. When someone criticizes this hospital, it feels like a personal insult.	4.38	.93	4.37	.85
2. I am very interested in what others think about the hospital	4.88	.35	4.81	.61
3 When I talk about the hospital, I usually say "we" rather than "they."	4.89	.40	4.85	.58
4. This hospital's successes are my successes.	4.45	.79	4.33	.93
5. When someone praises the hospital it feels like a personal compliment	4.38	.73	4.42	.82

Note: (R) Reverse keyed item.

n for CEO career tenure of 5 or more years varies between 215 and 216. Variation is due to missing data. CEO career tenure of 5 years or less n =67 respondents.

Organization and occupational commitment scale item responses were made on a 7 point scale (1= strongly disagree and 7= strongly agree).

Organizational identification scale item responses were made on a 5 point scale (1= strongly disagree and 5= strongly agree).

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APPENDICES

APPENDIX A

Top 100 Hospitals: Benchmarks for Success 1999

SMALL BENCHMARK HOSPITALS (25-99 beds)
Wedowee Hospital, Wedowee, AL
WellStar Douglas Hospital, Douglasville, GA
Donalson Hospital, Donalsonville, GA
Wilcox Memorial Hospital, Lihue, HI
St Benedict's Family Medical Center, Jerome, ID
Shelby Memorial Hospital, Shelbyville, IL
Our Lady of the Way Hospital, Martin KY
Gerber Memorial Health Services, Fremont, MI
Oswego Memorial Hospital Gaylord, MI
Northfield Hospital, Northfield, MN
Buffalo Hospital, Buffalo MN
St John's Mercy Hospital, Washington, MO
Punxazutzaney Area Hospital, Inc. Punxsutawney, PA
Baptist DeKalb Hospital, Smithville, TN
Tri-City Community Hospital, Jourdanton, TX
Valley View Medical Center, Cedar City UT
Castle View Hospital,, Price UT
American Fork Hospital, American Fork, UT
St Clare Hospital, Lakewood, WA
Powell Hospital and Nursing Home, Powell, WY
Medium Size Benchmark hospitals (100-249 beds)
Mills Peninsula Health Services, Burlingame, CA
N. Florida Regional Medical Center, Inc., Gainesville, FL
Gulf Coast Medical Center, Panama City FL
Brandon Regional Hospital Brandon, FL
Seven Rivers Community Hospital, Crystal River FL
Mease Countryside Hospital, Safety Harbor, FL
Bulloch Memorial Hospital, Statesboro GA
Meadowview Regional Medical Center, Maysville, KY
Cape Cod Hospital, Hyannis, MA
Milford-Whitinsville Regional Hospital, Milford, MA
William Beaumont Hospital – Troy , MI
Mercy Hospital Anderson, Cincinnati, OH
Medical Center of SE Oklahoma, Durant, OK
Indian Path Medical Center, Kingsport, TN
Cottonwood Hospital Medical Center, Murray, UT
Inova Fair Oaks Hospital Fairfax, VA
St Joseph Medical Center, Tacoma, WA
St Francis Hospital, Federal Way, WA
Theda Clark Medical Center, Neenah WI
Bellin Memorial Hospital, Green Bay WI
Appleton Medical Center, Appleton, WI

Large Community Benchmark Hospitals (250 + beds)
Hemet Valley Medical Center, Hemet, CA
Baptist Hospital of Miami, Miami FL
Martin Memorial Health System, Stuart, FL
Munroe Regional Medical Center, Ocala, FL
Leesburg Regional Medical Center, Leesburg, FL
Morton Plant Hospital, Clearwater, FL
Aventura Hospital & Medical Center, Aventura, FL
Memorial Hospital Jacksonville, Jacksonville, FL
Blake Medical Center, Bradenton FL
Regional Medical Center- Bayonet Point, Hudson, FL
WellStar Kennestone Hospital, Marietta GA
St Alexius Medical Center Hoffman Estates, IL
St. Rita's Medical Center, Lima OH
Middletown Regional Hospital, Middletown, OH
Licking Memorial Hospital, Neward, OH
Trident Regional Medical Center, Charleston, SC
Baptist Hospital of E. Tennessee – Knoxville, Knoxville, TN
Good Shepherd Medical Center, Longview TX
Clear Lake Regional Medical Center, Webster, TX
Spring Branch Medical Center, Houston, TX
Pomona Valley Hospital Medical Center, Pomona, CA
Exempla St Joseph Hospital, Denver, CO
South Miami Hospital, South Miami, FL
Palmetto General Hospital, Hialeah, FL
Swedish American Hospital, Rockford, IL
St Vincent Hospital & Health Services, Indianapolis, IN
Munson Medical Center, Traverse City MI
SMDC Health System, Duluth, MN
St Cloud Hospital St Cloud MN
Rochester Methodist Hospital, Rochester, MN
St John's Mercy Medical Center, St Louis MO
Aultman Hospital, Canton, OH
Hillcrest Hospital Mayfield Heights, OH
Providence St Vincent Medical Center, Portland OR
Providence Portland Medical Center, Portland OR
York Hospital, York PA
Lancaster General Hospital, Lancaster, PA
Wellmont Holston Valley Medical Center, Kingsport, TN
St Thomas Health Services, Nashville, TN
McAllen Medical Center, McAllen TX
Harris Methodist Ft Worth, Ft Worth TX
Memorial Hospital System Houston TX
Inova Fairfax Hospital, Falls Church VA
Chippenham & Johnston-Willis Hospital, Richmond VA
Southwest Washington Medical Center, Vancouver, WA

Hospitals with 250+ beds)
Pamona Valley Hospital medical Center, Pomona, CA
Exempla St Joseph Hospital, Denver, CO
South Miami Hospital, South Miami, FL
Palmetto General Hospital, Hiaaleah, FL
Swedish American Hospital, Rockford, IL
St Vincent Hospitals & Health Services, Indianapolis, IN
Munson Medical Center, Traverse City, MI
SDMC Health System, Ssuluth, MN
St Cloud Hospital, Saint Cloud, MN
Rochester Methodist Hospital, Rochester, MN
Aaultman Hospital, Canton, OH
Hillcrest Hospital, Mayfield Heights, OH
Providence St Vincent Medical Center, Portland, OR
Providence Portland Medical Center, Portland. OR
York Hospital, York, PA
Lancaster General Hospital, Lancaster, PA
Wellmont Holston Valley Medical Center, Kingsport, TN
St Thomas Health Services, Nashville, TN
McAllen Medical Center, McAllen TX
Harris Methodist Ft Worth, Fort Worth, TX
Memorial Hospital System, Houston, TX
Inova Fairfax Hospital, Falls Church, VA
Chippenham & Johnson-Willis Hospital, Richmond VA
Southwest Washington Medical Center, Vancouver, WA
Major Teaching Hospital (400+ beds)
Hospital of St Raphael, New Haven, CT
Washington Hospital Center, Washington DC
Evanston Northwestern Healthcare, Evanston, IL
Christ Hospital and Medical Center, Oak Lawn, IL
Lutheran General Hospital, Park Ridge, IL
Baystate Medical Center, Springfield, MA
Brigham & Women's Hospital, Boston, MA
Spectrum Health Downtown Campus, Grand Rapids, MI
William Beaumont Hospital, Royal Oak, Royal Oak, MI
St Joseph Mercy Hospital, Ypsilanti, MI
Sparrow Health System Lansing, MI
Albany Medical Center Hospital, Albany, NY
The University of Tennessee Memorial Hospital, Knoxville, TN
Vanderbilt University Hospital, Nashville, TN
University of Virginia Medical Center, Charlottesville, VA

Note. the national Top performing hospitals includes 20 hospitals from the small hospital group, 21 from the medium group (a tie in the medium hospital group resulting in the addition of one hospital to the final list), 20 hospitals from the large community hospital comparison group 25 hospitals from the teaching hospital comparison group and 15 hospitals from the major teaching hospital comparison group.

APPENDIX B

100 Top Hospitals: Benchmarks for Success 2000

SMALL BENCHMARK HOSPITALS (25-99 beds)
Thomasville Infirmary, Thomasville, AL
Wellstar Douglas Hospital, Douglasville, GA
St Mary's Hospital, Cottonwood, ID
Shelby Memorial Hospital, Shelbyville, IL
Memorial Hospital, Manchester, KY
United Memorial Health Center, Greenville, MI
Otsego Memorial Hospital, Gaylord, MI
Itasca Medical Center, Grand Rapids, MI
Austin Medical Center, Austin MN
St John's Mercy Hospital, Washington, MO
St Joseph Hospital-West, Lake Saint Louis, MO
Titusville Area Hospital, Titusville, PA
Baptist DeKalb Hospital, Smithville, TN
Hendersonville Medical Center, Hendersonville, TN
Valley View Medical Center, Cedar City, UT
Enumclaw Community Hospital Enumclaw, WA
New London Family Medical Center, New London, WI
Sauk Prairie Memorial Hospital, Prairie Du Sac, WI
Medium Size Benchmark hospitals (100-249 beds)
Medical Center Enterprise, Enterprise, AL
Tempe St Luke's Hospital, Tempe, AZ
Brandon, Regional Hospital, Brandon, FL
Largo Medical Center, Largo, FL
Mease Countryside Hospital, Safely Harbor. FL
Palms West Hospital Loxahatchee, FL
Fairview Park Hospital, Dublin, GL
Terre Haute Regional Hospital, Terre Haute, IN
Milford-Whitensville Regional Hospital, Milford, MA
Mercy Hospital Anderson, Cincinnati, OH
St. Joseph Health Center, Warren OH
Licking Memorial Hospital, Neward, OH
Medical Center of Southeastern Oklahoma, Durant, OK
Cottonwood Hospital Medical Center, Murray, UT
Logan Regional Hospital, Logan, UT
Martha Jefferson Hospital, Charlottesville, VA
St Francis Hospital, Federal Way WA
Theda Clark Medical Center Neenah, WI
Appleton Medical Center, Appleton, WI

Large Community Benchmark Hospitals (250 + beds)
JFK Medical Center, Atlantis FL
Leesburg Regional Medical Center, Leesburg, FL
Palms of Pasadena Hospital Saint Petersburg, FL
Aventura Hospital & Medical Center Aventura, FL
Memorial Hospital Jacksonville, Jacksonville, FL
Community Hospital of New Port Richey, New Port Richey, FL
North Florida Regional Medical Center, Gainesville, FL
Florida Medical Center, Ft Lauderdale, FL
Blake Medical Center, Bradenton, FL
]Cape Coral Hospital, Cape Coral FL
Regional Medical Center – Bayonet Point, Hudson, FL
Wellstar Kennestone Hospital, Marietta, GA
Doctors Hospital Augusta, GA
Washington County Hospital Association, Hagerstown, MD
EMH Regional Medical Center, Elyria OH
UPMA-Passavant, Pittsburgh, PA
Westmoreland Regional Hospital Greensburg, PA
Baptist Hospital of East Tennessee, Knoxville, TN
Houston Northwest Medical Center, Houston, TX
St Joseph's Hospital, Parkersburg, WV
Teaching Benchmark Hospitals (250+ beds)
Scripps Mercy Hospital, San Diego, CA
Pomona Valley Hospital Medical Center, Pomona, CA
Morton Plant Hospital, Clearwater, FL
Palmetto General Hospital, Hialeah, FL
Ball Memorial Hospital Muncie, IN
Downtown Worchester Hospital, Worcester, MA
Beverly Hospital, Beverly, MA
Munson Medical Center, Traverse City, MI
McLaren Regional Medical Center, Flint, MI
Methodist Hospital, Saint Louis Park MN
St John's Mercy Medical Center, Saint Louis, MO
St Luke's Hospital, chesterfield, MO
Good Samaritan Hospital, Dayton, OH
Ketteering Medical Center, Kettering, OH
Aultman Hospital, Canton, OH
The Christ Hospital, Cincinnati, OH
Hillcvrest Hospital, Mayfield Heights, OH
Providence St Vincent Medical Center, Portland, OR
Providence Portland Medical Center, Portland OR
York Hospital, York, PA
Hamot Medical Center, Erie, PA
Lancaster General Hospital, Lancaster, PA
Sentara Virginia Beach General Hospital, Virginia Beach, VA
Inova Fairfax Hospital, Falls Church VA

Southwest Washington Medical Center, Vancouver, WA
Major Teaching Benchmark Hospitals (400+ beds)
Saint Francis Hospital & Medical Center, Hartford, CT
Hartford Hospital, Hartford, CT
Christiana Care Health Services, Wilmington DE
Evanston Northwestern Healthcare, Evanston, IL
Advocate Christ Hospital and Medical Center, Oak Lawn, IL
Lutheran General Hospital, Park Ridge, IL
Brigham & Women's Hospital Boston, MA
Spectrum Health Downtown Campus, Grand Rapids, MI
William Beaumont Hospital – Royal Oak, Royal Oak, MI
Kennedy Memorial Hospital , Cherry Hill, MJ
The Ohio State University Hospitals, Columbus, OH
Cleveland Clinic Foundation, Cleveland, OH
Thomas Jefferson University Hospital, Nashville, TN
Parkland Health & Hospital Systems, Dallas, TX

Note. The national list of 100 top performing hospitals includes 20 hospitals from the small hospital comparison group, 20 hospitals from the medium size hospital group, 20 hospitals from the large community hospital group, 25 hospitals from the teaching hospital comparison group and 15 hospitals from the major teaching hospital comparison group. The entire study group included: 1,322 hospitals from the small hospital comparison group, 1130 hospitals from the medium hospital comparison group, 242 hospitals from the large community hospital comparison group, 297 hospitals from the teaching comparison group, and 101 hospitals from the major teaching comparison group.

APPENDIX C

100 Top Hospitals: ICU Benchmarks for Success 2000 (Solucient, 2001a)

Teaching Hospitals with Residency Programs in Critical Care
University Medical Center, Tucson, AZ
New Britain General Hospital, New Britain, CT
Grady Memorial Hospital, Atlanta, GA
Johns Hopkins Bayview Medical Center, Baltimore, MD
Barnes-Jewish Hospital, Saint Louis, MO
Montefiore Medical Center, Bronx, NY
North Shore University Hospital, Manhasset, NY
Crouse Hospital, Syracuse, NY
NYU Health Center, New York, NY
Erie County Medical Center, Buffalo, NY
Lehigh Valley Hospital, Allentown, PA
Thomas Jefferson University Hospital, Philadelphia, PA
Penn State S Hershey Medical Center, Hershey, PA
University of Texas Medical Branch Hospital, Galveston, TX
University of Virginia Health System, Charlottesville, VA
Teaching Hospitals
Loma Linda University Medical Center, Loma Linda, CA
Exempla Saint Joseph Hospital, Denver, CO
Hospital of St. Raphael, New Haven CT
Middlesex Hospital, Middletown, CT
St. Francis Hospital, Wilmington, DE
Cedars Medical Center, Miami, FL
Community Hospital East, Indianapolis, IN
St Vincent Hospital & Health Services, Indianapolis, IN
Franklin Square Hospital Center, Baltimore, MD
Union Memorial Hospital, Baltimore MD
Greater Baltimore Medical Center, Baltimore, MD
HealthAlliance Hospital, Leominster, MA
Mount Auburn Hospital, Cambridge, MA
UMASS Memorial Medical Center, Worcester, MA
Providence Hospital and Medical Center, Southfield, MI
Spectrum Health Downtown Campus, Grand Rapids, MI
Bon Secours Cottage Health Services, Grosse Point, MI
Sinai-Grace Hospital, Detroit, MI
St. Joseph's Health Center, Syracuse, NY
Park Ridge Hospital, Rochester, NY
Mercy Hospital of Buffalo, Buffalo, NY
Mission Saint Joseph's Health System, Asheville, NC
Summa Health System, Akron, OH

Fairview Hospital, Cleveland, OH St. John West Shore Hospital, Westlake, OH UPMC McKeesport Hospital, McKeesport, PA Chestnut Hill Hospital, Philadelphia, PA York Hospital, York, PA St. Luke's Hospital & Health Network, Bethlehem, PA Hamot Medical Center, Erie, PA Western Pennsylvania Hospital, Pittsburgh, PA Lancaster General Hospital, Lancaster, PA Montgomery Hospital Medical Center, Norristown, PA Mercy Fitzgerald Hospital, Darby, PA Easton Hospital, Easton, PA Crozer-Chester Medical Center, Upland, PA Lankenau Hospital, Allentown, PA Bristol Regional Medical Center, Bristol, TN Baptist Hospital, Nashville, TN
Community Hospitals Northwest Medical Center, Tucson, AZ Summit Medical Center, Oakland, CA MidState Medical Center, Meriden, CT Lee Memorial Health System, Fort Myers, FL St. Anthony's Hospital, Saint Petersburg, FL JFK Medical Center, Atlantis, FL Aventura Hospital and Medical Center, Adventura, FL Winter Park Memorial Hospital, Winter Park, FL Palm Beach Gardens Medical Center, Palm Beach Gardens, FL Florida Medical center, Ft Lauderdale, FL Blake Medical Center, Bradenton, FL Southwest Florida Regional Medical Center, Fort Myers, FL Orange Park Medical Center, Orange Park, FL Putnam Medical Center, Palatka, FL Brandon Regional Hospital, Brandon, FL Largo Medical center, Largo, FL Oak Hill Hospital, Spring Hill, FL Mease Countryside Hospital, Safety Harbor, FL Hardin Memorial Hospital, Elizabethtown, KY North Arundel Hospital, Glen Burnie, MD Albany Memorial Hospital, Albany, NY Ellis Hospital, Schenectady, NY Seton Health System, Troy, NY Parma Community General Hospital, Parma, OH Trumbull Memorial Hospital – Forum Health, Warren, OH Southwest General Health Center, Middleburg Heights, OH Community Health Partners, Lorain, OH Grand View Hospital, Sellersville, PA

Westmoreland Regional Hospital, Greensburg, PA
Nazareth Hospital, Philadelphia, PA
Riddle Memorial Hospital, Media, PA
St. Clair Memorial Hospital, Pittsburgh, PA
Jefferson Hospital, Pittsburgh, PA
Baptist Hospital of East Tennessee, Knoxville, TN
Parkridge Medical Center, Chattanooga, TN
Good Shepherd Medical Center, Longview, TX
All Saints Health System, Fort Worth, TX
Wadley Regional Medical Center, Texarkana, TX
Memorial Hermann Baptist Beaumont Hospital, Beaumont, TX
Southwest Texas Methodist Hospital, San Antonio, TX
Shannon Medical Center, San Angelo, TX
Metropolitan Methodist Hospital, San Antonio, TX
Doctors Hospital of Dallas, Dallas, TX
Augusta Medical Center, Fishersville, WA
Central Washington Hospital, Wenatchee, WA

APPENDIX D

100 Top Hospitals: Cardiovascular Benchmarks for Success 2001 (Solucient, 2001a)

Teaching hospitals with Cardiovascular Residency programs
Kaiser Foundation Hospital-Sunset, Los Angeles, CA
Loma Linda University Medical Center, Loma Linda, CA
Evanston Northwestern Healthcare, Evanston, IL
Advocate Lutheran General Hospital, Park Ridge, IL
Maine Medical Center, Portland ME
St Elizabeth's Medical Center, Boston, MA
Massachusetts General Hospital, Boston MA
Lahey Clinic Hospital, Burlington, MA
Providence Hospital and Medical Center, Southfield, MI
St John Hospital & Medical Center, Detroit, MI
Sparrow Health System, Lansing, MI
St Mary's Hospital – Rochester, Rochester, MN
Dartmouth-Hitchcock Medical Center, Lebanon, NH
Robert Wood Johnson University Hospital, New Brunswick, NJ
St Peter's Hospital Albany, NY
North Shore University Hospital, Manhasset, NY
Duke University Hospital and Health System, Durham, NC
Cleveland Clinic foundation, Cleveland, OH
Guthrie Healthcare system-Robert Packer Hospital, Sayre, PA
Thomas Jefferson University Hospital, Philadelphia, PA
Saint Thomas Health Services, Nashville, TN
Baylor University Medical Center, Dallas, TX
Scott & White Memorial Hospital, Temple, TX
St Mary's Hospital, Huntington, WV
University f Wisconsin Hospital & Clinics, Madison, WI
Teaching Hospitals
Baptist Medical Center, Montgomery AL
St Vincent's Medical Center, Bridgeport, CT
Halifax Medical Center, Daytona Beach, FL
Miami Heart Institute South, Miami Beach, FL
Morton Plant Hospital Clearwater FL
Medical Center of Central Georgia, Macon, GA
Saint Alphonsus Regional Medical Center, Boise, ID
Saint Francis Hospital-Evanston, Evanston, IL
Saint Margaret Mercy Healthcare Centers Hammond, IN
Memorial Hospital of South Bend, South Bend, IN
Mercy Medical center, North Iowa, Mason City IA
Mercy Medical Center – Sioux City , Sioux City, IA
Wesley Medical Center, Wichita, KS
Saint Elizabeth Medical Center, Edgewood, KY

East Jefferson General Hospital, Matairie, LA
Union Memorial Hospital, Baltimore, MD
Oakwood Hospital and Medical center-Dearborn, Dearborn, MI
Spectrum Health Downtown Campus, Grand Rapids, MI
Covenant Health Care-Cooper Saginaw, MI
Munson Medical center, Traverse City, MI
St Mary's Duluth clinic Health System Duluth, MN
St Cloud Hospital, Saint Cloud, MN
Methodist Hospital, Saint Louis Park, MN
Abbott-Northwestern Hospital, Minneapolis, MN
North Mississippi Medical Center, Tupelo, MS
St John's Mercy Medical Center, Saint Louis, M
St Luke's Hospital, Chesterfield, O
St Vincent HealthCare, Billings, MT
BryanLGH Medical Center-East, Lincoln, NE
Morristown Memorial Hospital, Morristown NJ
St Alexius Medical Center, Bismarck ND
Grant Medical Center, Columbus, OH
Mount Carmel West, Columbus OH
The Christ Hospital, Cincinnati, OH
York Hospital, York PA
St Luke's Hospital & Health Network, Bethlehem,PA
Spartenburg Regional Healthcare System, Spartanburg, SC
Avera McKennan Hospital, Sioux Falls, SD
Sioux Valley Hospital, Sioux Falls, SD
Memorial Hospital, Chattanooga, TN
Medical Center Hospital, Odessa, TX
St Marks Hospital, Salt Lake City, UT
Sentara Norfolk General Hospital, Falls Church, VA
Wausau Hospital, Wausau, WI

Community Hospitals

East Alabama Medical Center, Opelika, AL
Walter O. Boswell Memorial Hospital, sun City, AZ
Bakersfield Memorial Hospital, Bakersfield, ca
Saint Agnes Medical center, Fresno, CA
Lee Memorial Health System, Fort Myers, FL
Monroe Regional Medical Center, Ocala, FL
Holy Cross Hospital, Fort Lauderdale, FL
Florida Medical Center, Fort Lauderdale, FL
Ocala Regional Medical Center, Ocala, FL
Regional Medical Center Bayonet Point, Hudson, FL
Saint Joseph's Hospital of Atlanta, Atlanta, GA
Saint Francis Hospital and Healthcare Center, Blue Island, IL
St Joseph HealthCare, Lexington, KY
Lafayette General Medical Center, Lafayette, LA

Our Lady of the Lake Regional Medical Center, Baton Rouge, LA
St Francis Medical Center, Monroe, LA
Fairview Southdale Hospital, Edina, MN
Memorial Hospital, Gulfport, MS
Boone Hospital Center, Columbia, MO
St Patrick Hospital and Health Sciences Center, Missoula, MT
General Hospital Center at Passaic, Passaic, NJ
Ellis Hospital, Schenectady, NY
St. Francis Hospital, Roslyn, NY
First-Health Moore Regional Hospital, Pinehurst, NC
EMH Regional Medical Center, Elyria, OH
Rogue Valley Medical Center, Medford, OR
Grand Strand Regional Medical Center, Myrtle Beach, SC
Baptist Hospital of East Tennessee, Knoxville, TN
Fort Sanders Parkwest Medical Center, Knoxville, TN
Henrico Doctors Hospital, Richmond, VA

APPENDIX E

100 Top Hospitals: Orthopedic Benchmarks for Success 2000 (HCIA-Sachs, 2000b)

Teaching Hospitals with Orthopedic Residency Programs
Long Beach Memorial Medical Center, Long Beach, CA
Evanston Northwestern Healthcare, Evanston, IL
St John's Hospital, Springfield, IL
Jewish Hospital, Louisville, KY
Spectrum Health Downtown Campus Grand Rapids, MI
Borgess Medical Center, Kalamazoo, MI
St Mary's Hospital – Rochester , MN
Abbott-Northwestern Hospital, Minneapolis, MN
Lenox Hill Hospital, New York NY
Allegheny General Hospital, Pittsburgh PA
St Margaret Memorial Hospital, Pittsburgh PA
The Byrn Mawr Hospital, Bryn Mawr, PA
Scott & White Memorial Hospital, Temple, TX
Methodist Hospital Houston, TX
Carilion Medical Center Roanoke, VA
Teaching Hospitals
Baptist Medical Center Montgomery, AL
Huntsville Hospital Huntsville, AL
DCH Regional Medical Center, Tuscaloosa, AL
BMC- Montclair, Birmingham, AL
California Pacific Medical Center, San Francisco, CA
Poudre Valle Hospital, Fort Collins, CO
Sacred Heart Hospital, Clearwater FL
Piedmont Hospital, Atlanta, GA
St. Alphonsus Regional Medical Center, Boise, ID
Decatur Memorial Hospital, Decatur, IL
Memorial Hospital of South Bend, South Bend, IN
Deaconess Hospital, Evansville, IN
MASS Memorial Medical Center, Worcester, MA
Spectrum Health East Campus, Grand Rapids, MI
Bay Medical Center, Bay City, MI
Marquette General Hospital, Marquette, MI
Covenant Health Care-Cooper, Saginaw, MI
Munson Medical Center, Traverse City, MI
Sparrow Health System, Lansing, MI
St. Mary's Duluth Clinic Health System, Duluth, MN
St. Luke's Hospital, Chesterfield, MO
St. Vincent Hospital & Health Center, Billings, MT

Nebraska Methodist Hospital, Omaha, NE
North Shore University Hospital, Manhasset, NY
St. Joseph's Hospital Health Canter, Syracuse, NY
Forsyth Memorial Hospital, Winston-Salem, NC
St Vincent Hospital Medical Center, Portland,OR
Kaiser Sunnyside Hospital, Clackamas, OR
Washington Hospital, Washington, PA
Reading Hospital & Medical Center, West Reading, PA
Williamsport Hospital & Medical Center, Williamsport, PA
Lancaster General Hospital, Lancaster, PA
Conemaugh Memorial Medical Center, Johnstown, PA
WVHCS Hospital, Kingston, PA
Sioux Valley Hospital, Sioux Falls, SD
St Thomas Health Services, Nashville, TN
Providence Health Center, Waco, TX
St Luke's Episcopal Hospital, Houston, TX
Centra Health, Lynchburg, VA

Community Hospitals

Northport Hospital-DCH, Northport, AL
Valley Lutheran Hospital, Mesa, AZ
Mills Peninsula Hospital, Burlingame, CA
Verdugo Hills Hospital, Glendale, CA
St John's Hospital, Santa Monica, CA
Lee Memorial Hospital, Fort Myers, FL
Martin Memorial Medical Center, Stuart, FL
Lakeland Regional Medical Center, Lakeland, FL
North Florida Regional Medical Center, Gainesville, FL
Marion Community Hospital (Ocala Regional Medical Center) Ocala, FL
Cape Coral Medical Center, Cape Coral, FL
Southeast Georgia Regional Medical Center, Brunswick, GA
St. Joseph's Hospital of Atlanta, Atlanta, GA
Kootenai Medical Center, Coeur D'Alene, ID
Northwest Community Hospital, Arlington Heights, IL
Alexian Brothers Medical Center, Elk Grove Village, IL
St. Joseph Hospital, Lexington, K
Lourdes Hospital, Paducah, KY
Western Baptist Hospital, Paducah, KY
Baptist Hospital-East, Louisville, KY
St. Patrick Hospital, Lake Charles, LA
Our Lady of Lourdes Regional Medical Center, LaFayette, LA
St. Francis Medical Center, Monroe, LA
St. Joseph's Hospital, Mount Clemens, MI
Baptist Memorial Hospital North Mississippi, Oxford, MS
Singing River Hospital System, Pascagoula, MS
Heartland Regional Medical Center, Saint Joseph, MO

Boone Hospital Center, Columbia, MO
Skaggs Community Health Center, Branson, MO
Columbia Regional Hospital, Columbia, MO
Regional West Medical Center, Scottsfluff, NE
Corning Hospital, Corning, NY
First Health Moore Regional Hospital, Pinehurst, NC
Presbyterian-Orthopaedic Hospital, Charlotte, NC
Lakewood Hospital, Lakewood, OH
St Mary's Mercy Hospital, enid, OK
St Charles Medical Center, Bend, OR
Bay Area Hospital, Coos Bay OR
DuBois Regional Medical Center, DuBois, PA
Muhlenberg Hospital Center, Bethlehem, PA
Grand Strand Regional Hospital, Myrtle Beach, SC
Columbia Centennial Medical Center, Nashville, TN
Sid Peterson Memorial Hospital, Kerrville, TX
University of Virginia Medical Center, Charlottesville, VA
Augusta Health Care, Inc., Fishersville, VA
Lewis-Gale Medical Center, Salem, VA

APPENDIX F

100 Top Hospital Stroke Benchmarks for Success – 2000 (HCIA-Sachs, 2001)

Teaching Hospitals with Neurology Residency Programs
Tucson Medical Center, Tucson, AZ
St. John's Hospital, Springfield, IL
Norton Hospital, Louisville, KY
Massachusetts General Hospital, Boston, MA
Henry Ford Health System, Detroit MI
Harper University Hospital, Detroit, MI
Albany Medical Center Hospital, Albany, NY
North Shore University Hospital, Manhasset, NY
NYU Health Center, New York NY
The Toledo Hospital, Toledo, OH
Allegheny General Hospital, Pittsburgh, PA
Thomas Jefferson University Hospital, Pittsburgh, PA
Thomas Jefferson University Hospital, Philadelphia, PA
Medical University of South Carolina, Charleston, SC
Methodist Hospital, Houston, TX
University of Wisconsin Hospital & Clinics, Madison, WI
Teaching Hospitals without Neurology Residency Programs
BMC-Montclair, Birmingham, AL
Hospital of St. Raphael, New Haven CT
Morton Plant Hospital, Clearwater, FL
St. Luke's Regional Medical Center, Boise, ID
Lutheran Hospital of Indiana, Fort Wayne, IN
Parkview Memorial Hospital, Fort Wayne, IN
Community Hospital East, Indianapolis, IN
St. Vincent Hospital & Health Care, Indianapolis, IN
St. Mary's Medical enter, Evansville, IN
St. Luke's Methodist Hospital, Cedar Rapids, IA
Wesley Medical Center, Wichita, KS
Willis-Knighton Health System, Shreveport LA
Greater Baltimore Medical Center, Baltimore, MD
Marquette General Hospital, Marquette, MI
William Beaumont Hospital, Royal Oak, MI
William Beaumont Hospital – Troy, Troy MI
St. Luke's Hospital, Kansas City, MO
St. Vincent Hospital & Health Center, Billings, MT
Bryan Memorial Hospital, Lincoln, NE
St. Peter's Hospital, Albany, NY
Mary Imogene Bassett Hospital, Cooperstown, NY
St Joseph's Hospital Health Center, Syracuse, NY
Pitt County Memorial Hospital, Greenville, NC

Kettering Memorial Hospital, Kettering, OH
Bethesda Hospital, Cincinnati, OH
Kaiser Sunnyside Hospital, Clackamas, OR
Geisinger Medical Center, Danville, PA
Hamot Medical Center, Erie, PA
Good Samaritan Hospital – Lebanon, Lebanon, PA
Lehigh Valley Hospital, Allentown, PA
The Bryn Mawr Hospital, Bryn Mawr, PA
Mercy Hospital – Scranton, PA
Sioux Valley Hospital, Sioux Falls, SD
Baylor University Medical Center, Dallas, TX
Scott & White Memorial Hospital, Temple, TX
St. Mary Hospital, Port Arthur TX
Carillon Medical Center (Carillon Roanoke Memorial Hospital), Roanoke, VA
Inova Fairfx Hospital Falls, Church, VA
Providence St. Peter Hospital, Olympia, WA
Wassau Hospital, Wausau, WI

Community Hospitals

Dominican Santa Cruz Hospital, Santa Cruz, CA
Salinas Valley Memorial Hospital, Salinas, CA
Lee Memorial Hospital, Fort Myers, FL
Martin Memorial Medical Center, Stuart, FL
Charlotte Regional Medical Center, Punta Gorda, FL
Munroe Regional Medical Center, Ocala, FL
St. Anthony's Hospital, Saint Petersburg, FL
Bon Secours-Venice Hospital, Venice, FL
Leesburg Regional Medical Center, Leesburg, FL
Sarasota Memorial Hospital, Sarasota, FL
Indian River Memorial Hospital, Vero Beach, FL
Palms of Pasadena Hospital, Saint Petersburg, FL
Palm Beach Gardens Medical Center, Palm Beach Gardens, FL
North Florida Regional Medical Center, Gainesville, FL
Marion Community Hospital (Ocala Regional Medical Center, Ocala, FL
West Florida Regional Medical Center, Pensacola, FL
Largo Medical Center, Largo, FL
Seven Rivers Community Hospital, Crystal River, FL
Oak Hill Hospital, Spring Hill, FL
Mease Countryside Hospital, Safety Harbor, FL
Englewood Community Hospital, Englewood, FL
West Georgia Health System, La Grange, GA
Middle Georgia Hospital, Macon, GA
St. Francis Hospital, Blue Island, IL
St. Joseph Hospital, Lexington, KY
Hardin Memorial Hospital, Elizabethtown, KY

Murray-Calloway County Hospital, Murray, KY
Northern Michigan Hospital, Petoskey, MI
Boone Hospital Center, Columbia, MO
St Francis Medical Center, Cape Girardeau, MO
The Medical Center at Princeton, Princeton NJ
Underwood Memorial Hospital, Woodbury, NJ
First Health Moore Regional Hospital, Pinehurst, NC
Northwest Medical Center, Oil City, PA
Poncono Medical Center, East Stroudsburg, PA
St. Clair Memorial Hospital, Pittsburgh, PA
Jefferson Hospital, Pittsburgh, PA
Hilton Head Medical Center & Clinics, Hilton Head Island, SC
Centennial Medical Center, Nashville, TN
Mother Frances Hospital, Tyler, TX
Memorial Hermann Baptist Beaumont, Beaumont TX
McAllen Medical Center, McAllen, TX
Memorial Regional Medical Center, Richmond, VA
Beckley ARH, Beckley WV

APPENDIX G

Communication to CEOs

Invitation to participate in survey

Dear _____,

I am writing to ask you for your help and participation in a management research study and survey of hospitals.

Your opinions and responses will be anonymous and confidential. In other words, your identity and affiliation with any specific hospital or health system will not be disclosed. I am seeking only aggregate not individual results.

The brief opinion survey will be sent to you within the next few days and will take about 10 minutes to complete. Thank you in advance for your consideration and valuable participation in this groundbreaking study.

Most Sincerely,
Helen Carlson, Ph.D. candidate

Helen Carlson is a healthcare executive and a Ph.D. candidate at Alliant International University San Diego, California, and can be reached by e-mail: CarlsonH@aol.com.

LETTER TO CEOS

Dear _____

I am a healthcare executive and Ph.D. candidate in Organizational Psychology at Alliant International University in San Diego, California. This dissertation research study involves a groundbreaking survey of Hospital CEOs. I am writing to ask for your help and participation by taking a few minutes to complete a survey.

Be assured that your name will be confidential and will not be associated with your responses. I am simply asking that you provide basic information about your professional role and the work that you do. Your participation is completely voluntary and the information that you provide is anonymous.

There will be no benefits associated with your participation in this study other than furthering our understanding of effective leadership in hospitals. The risk involved will not exceed that associated with daily professional life.

Thank you in advance for your participation in this study.

Sincerely,

Helen Carlson

I hereby give consent for the following information to be included as part of a research study by checking this box ☐.

If you do not wish to participate in the research study, please do not respond to the following questions.

Follow-up note

I am writing to you today to follow-up on my last request for your help and participation in a nationwide management research study and survey of hospitals. The on-line survey will take about 10 minutes to complete.

I will be blind to the link between your name and your responses. All of your opinions and responses will be anonymous and confidential. In other words, your identity and your affiliation with any specific hospital or health system will not be disclosed. I am only interested in the group response not individual responses.

This is the link to the survey:

Thank you very much for your time and consideration, and in advance for your valuable participation in this groundbreaking survey of hospital leadership .

Most Sincerely,
Helen Carlson, Ph.D. candidate

Helen Carlson is a healthcare executive and a Ph.D. candidate at Alliant International University in San Diego, California.

APPENDIX H

Survey

1. How many hospitals are you responsible for at this time?
   ☐ One ☐ Two ☐ More than Two

2. Was your hospital listed as one of the HCIA-Sachs (Solucient) 100 Top Hospitals National Benchmarks for Success publication in 2000? (e.g. 100 Top Hospitals, National Benchmarks for Success, 1999, 100 Top Hospitals: Orthopedic Benchmarks for Success; 100 Top Hospitals: ICU Benchmarks for Success, 100 Top Hospitals: Cardiovascular Benchmarks for Success, or 100 Top Hospitals: Regional Benchmarks for Success.)

   ☐ Yes ☐ No

3 Was your hospital recognized by HCIA-Sachs (Solucient) publication as a 100 Top Benchmark Hospital, or Center for Excellence in 2001? (e.g., 100 Top Hospitals National Benchmarks for Success, 2000; 100 Top Hospitals Cardiovascular Benchmarks for Success)

   ☐ Yes ☐ No

4. What is the bed-size of your hospital?

   ☐ Small (25-99 licensed beds) ☐ Medium (100-249 licensed beds) ☐ Large (over 250 beds)

5. Is your hospital classified as a not-for-profit facility?
   ☐ Yes ☐ No

6. How many years have you been the hospital CEO of this facility?

   ☐ Less than 1 year ☐Since 2001 ☐ Since 2000 ☐ Since 1999 ☐ Since 1998
   ☐ I have been in this role more than 5 years.

8. How many years overall have you been a Hospital CEO?
   ☐ less than 1 year ☐ 1 to 5 years ☐ over 5 years ☐ more than 10 years

9. What is your gender ? ☐ Male ☐ Female

Listed below is a series of statements that represent possible views that individuals may have about their organization and profession. With respect for your own feelings about your occupation and the particular organization for which you are working now, please indicate the degree of your agreement or disagreement with each statement by checking the choice that most closely your opinion.

1 = Strongly Disagree, 2 = Moderately Disagree, 3 = Slightly Disagree,
4 = Neither Agree nor Disagree, 5 = Slightly Agree, 6 = Moderately Agree,
7 = Strongly Agree.

SURVEY QUESTIONS

1. I would be very happy to spend the rest of my career with this organization.
2. I really feel as if this organization's problems are my own.
3. I do not feel like "part of the family" at my organization. (R).
4. I do not feel "emotionally attached" to this organization. (R)
5. This organization has a great deal of personal meaning for me.
6. I do not feel a strong sense of belonging to my organization. (R)
7. It would be very hard for me to leave my organization right now, even if I wanted to.
8. Too much in my life would be disrupted if I decided I wanted to leave my organization right now.
9. Right now, staying with my organization is a matter of necessity as much as desire.
10. One of the few negative consequences of leaving this organization would be the scarcity of available alternatives.
11. One of the major reasons I continue to work for this organization is that leaving would require considerable personal sacrifice; another organization may not match the overall benefits I have here.
12. If I had not already put so much of myself into this organization, I might consider working elsewhere.
13. I do not feel any obligation to remain with my current employer. (R)
14. Even if it were to my advantage, I do not feel it would be right to leave my organization now.
15. I would feel guilty if I left my organization now
16. This organization deserves my loyalty.
17. I would not leave my organization right now because I have a sense of obligation to the people in it.
18. I owe a great deal to my organization.
19. Being a hospital administrator is important to my self-image.
20. I regret having entered the hospital administration profession. (R)
21. I am proud to be in the hospital administration profession.
22. I dislike being a hospital administrator.
23. I do not identify with the hospital administration profession.
24. I am enthusiastic about hospital administration.

25. I have put too much into the hospital administration profession to consider changing now
26. Changing professions now would be difficult for me to do.
27. Too much of my life would be disrupted if I were to change my profession
28. It would be costly for me to change my profession now.
29. There are no pressures to keep me from changing professions. (R)
30. Changing professions now would require considerable personal sacrifice.
31. I believe people who have been trained in a profession have a responsibility to stay in that profession for a reasonable period of time.
32. I do not feel any obligation to remain in the hospital administration profession. (R)
33. I feel a responsibility to the hospital administration profession to continue in it.
34. Even if it were to my advantage, I do not feel that it would be right to leave hospital administration now.
35. I would feel guilty if I left hospital administration.
36. I am in Hospital Administration because of a sense of loyalty to it.

Note: Items 1-18 The Meyer and Allen three component measure of organizational commitment (Revised) Meyer and Allen (1997, p118-119).
Items 19–36 Meyer and Allen three component measure of occupational commitment. (see Meyer, Allen & Smith, 1993, p 544.)
(R): reverse scoring.

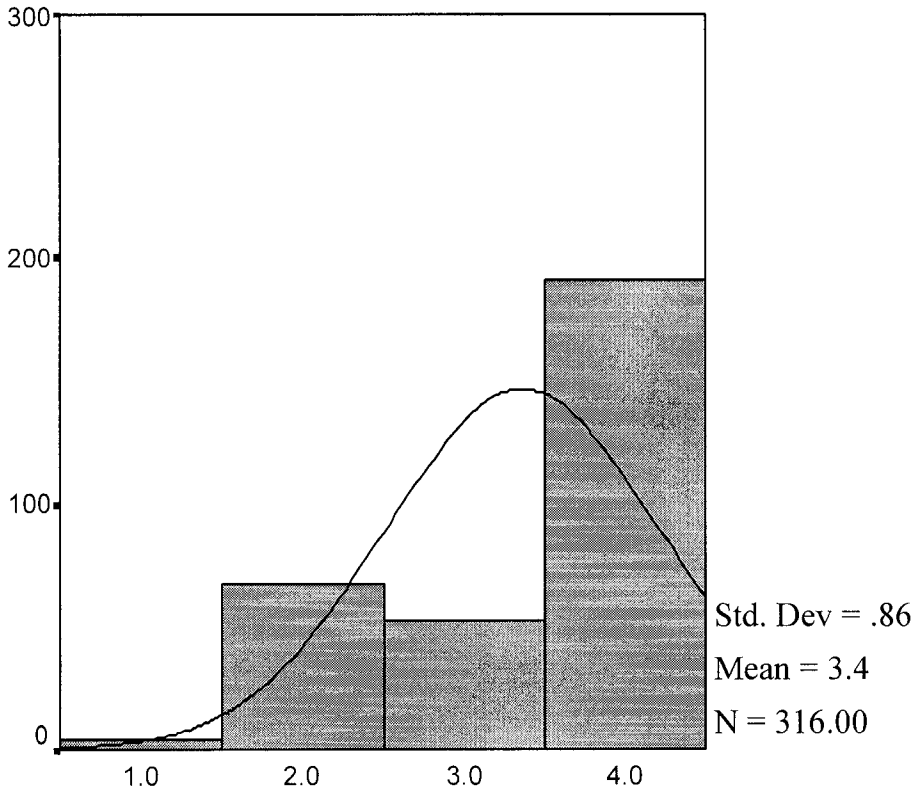
Answers to the following five questions were arranged in a 5 point scale where 1= strongly disagree, and 5 = strongly agree.

1. When someone criticizes this hospital, it feels like a personal insult.
2. I am very interested in what others think about the hospital
3. When I talk about the hospital, I usually say "we" rather than "they."
4. The hospital's successes are my successes.
5. When someone praises the hospital it feels like a personal compliment.

Note. The Organizational identification (OID) scale used in previous military research was used in this survey (Mael, 1988; Mael & Ashforth 1992; Mael & Ashforth, 1995).The questions were modified from its original form for relevance to hospitals by substituting the word "hospital" for the word "Army".

APPENDIX I

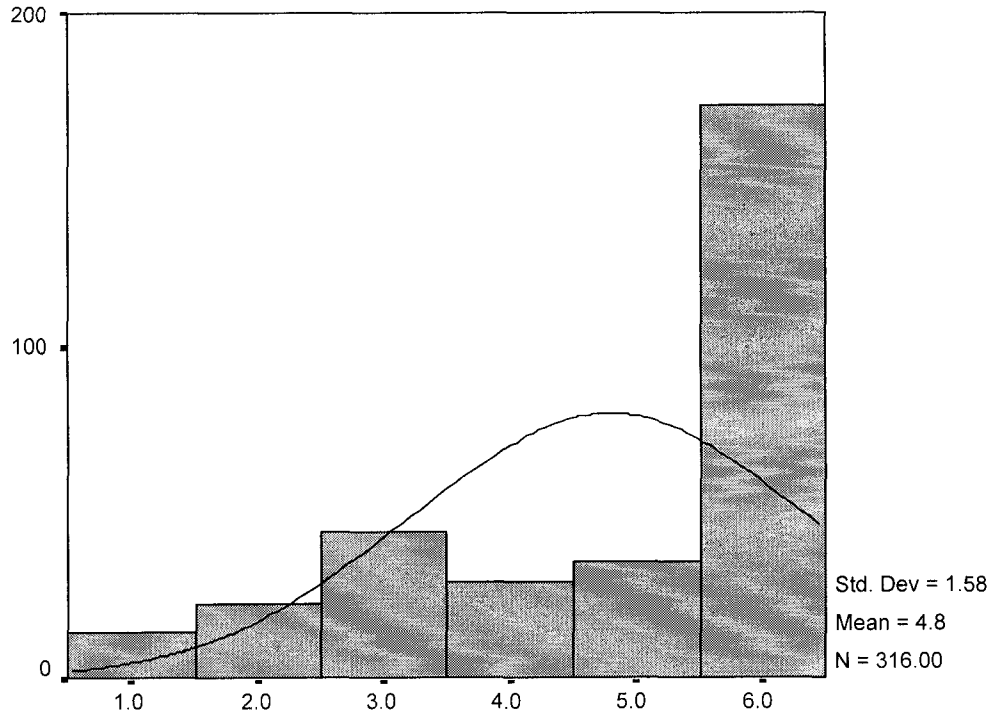
Histogram: CEO distribution by occupational tenure



1: less than 1 year, 2: 1-5 years, 3: 6-10 years, 4: more than 10 years

APPENDIX J:

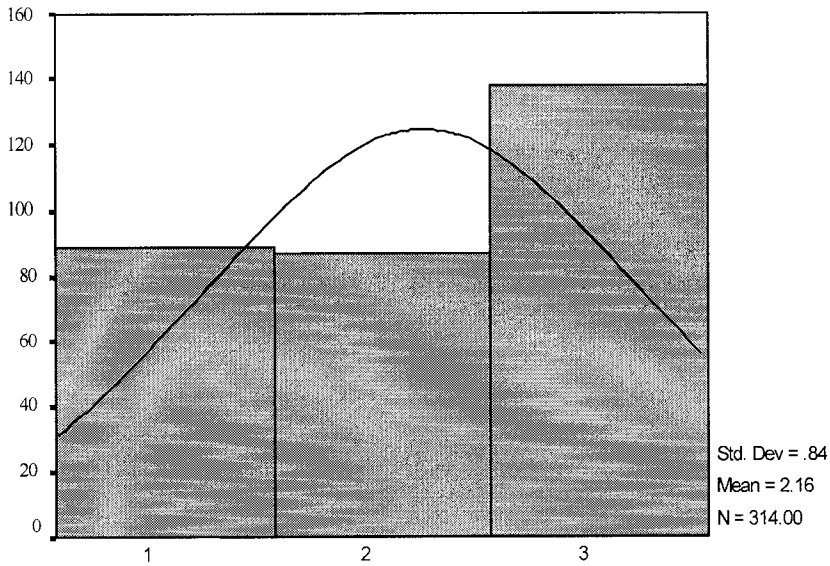
Histogram: CEO Distribution by organizational tenure
(Number of Years as CEO "here")



(1: Less than 1 year, 2: 1 year, 3: 2 years, 4: 3 years, 5: 4 years, 6: more than 5 years.)

APPENDIX K

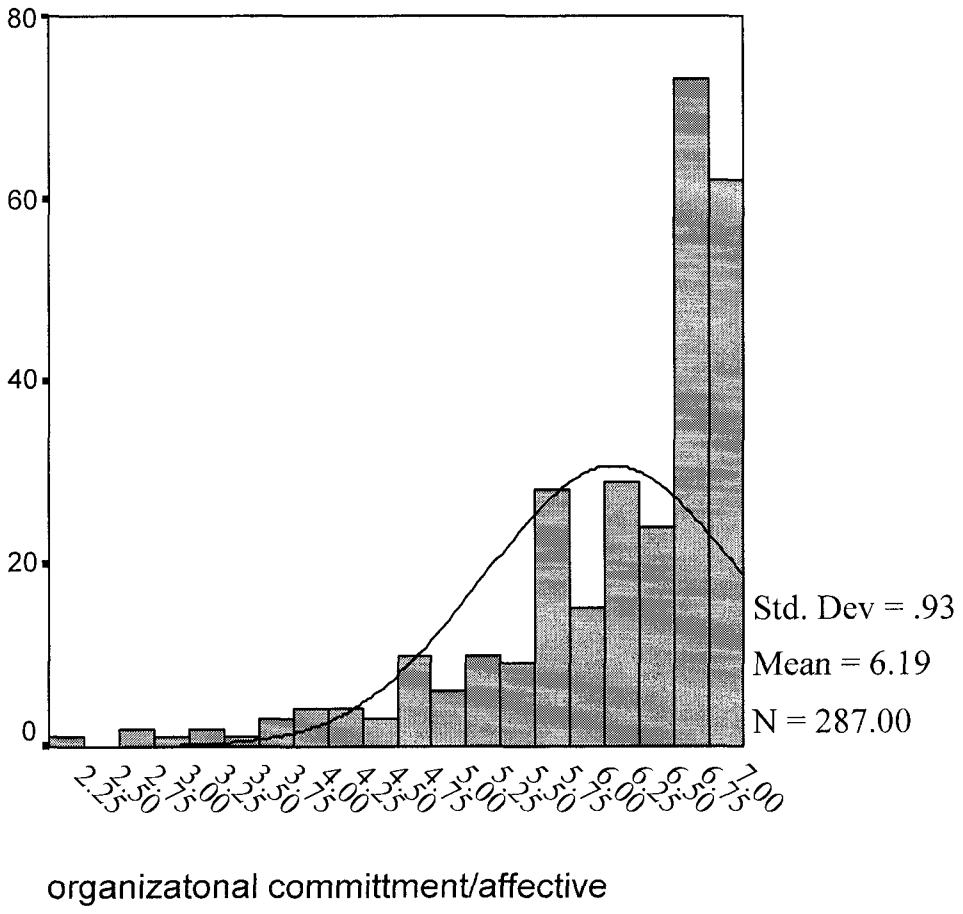
Histogram: Distribution of CEOs by Hospital Bed Size



Bed size 1: 25-99 beds, 2: 100-249 beds. 3: 250 beds

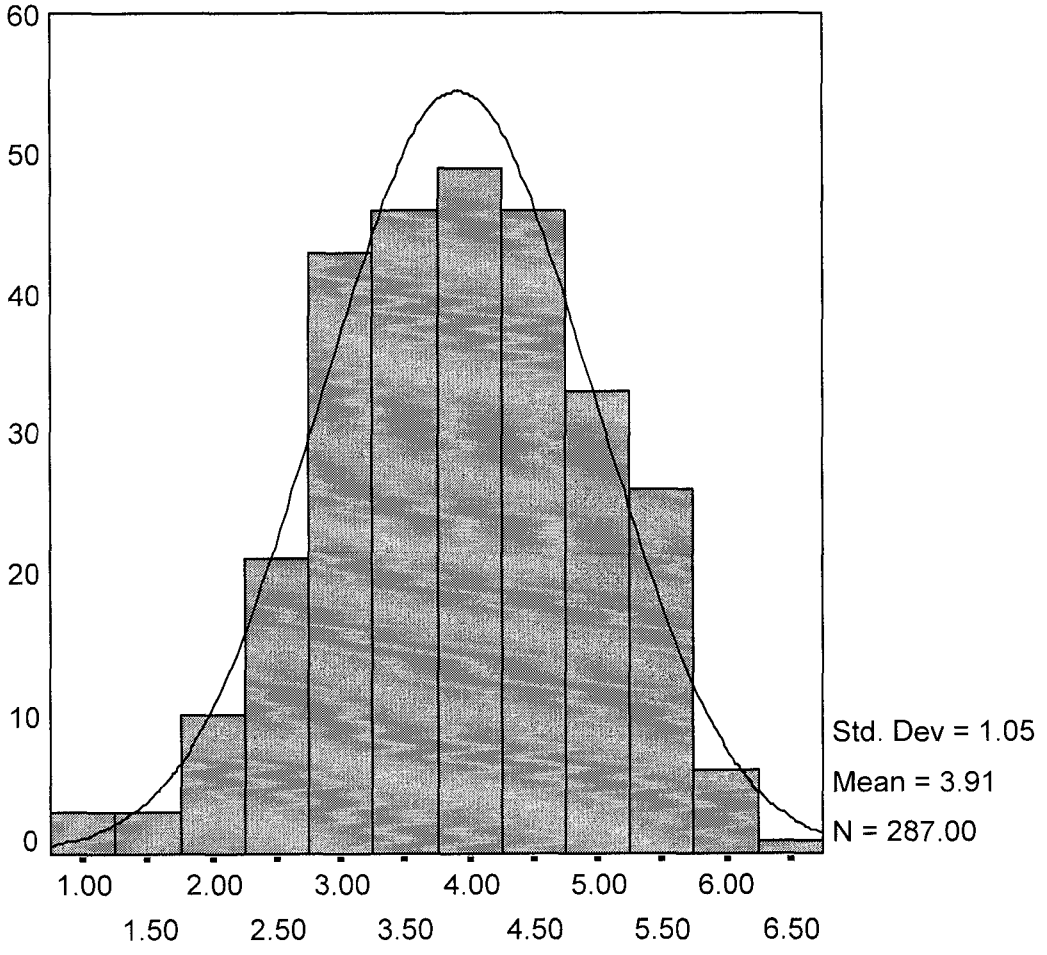
APPENDIX L

Histogram: Distribution of CEO responses on 0rganizational commitment - affective scale



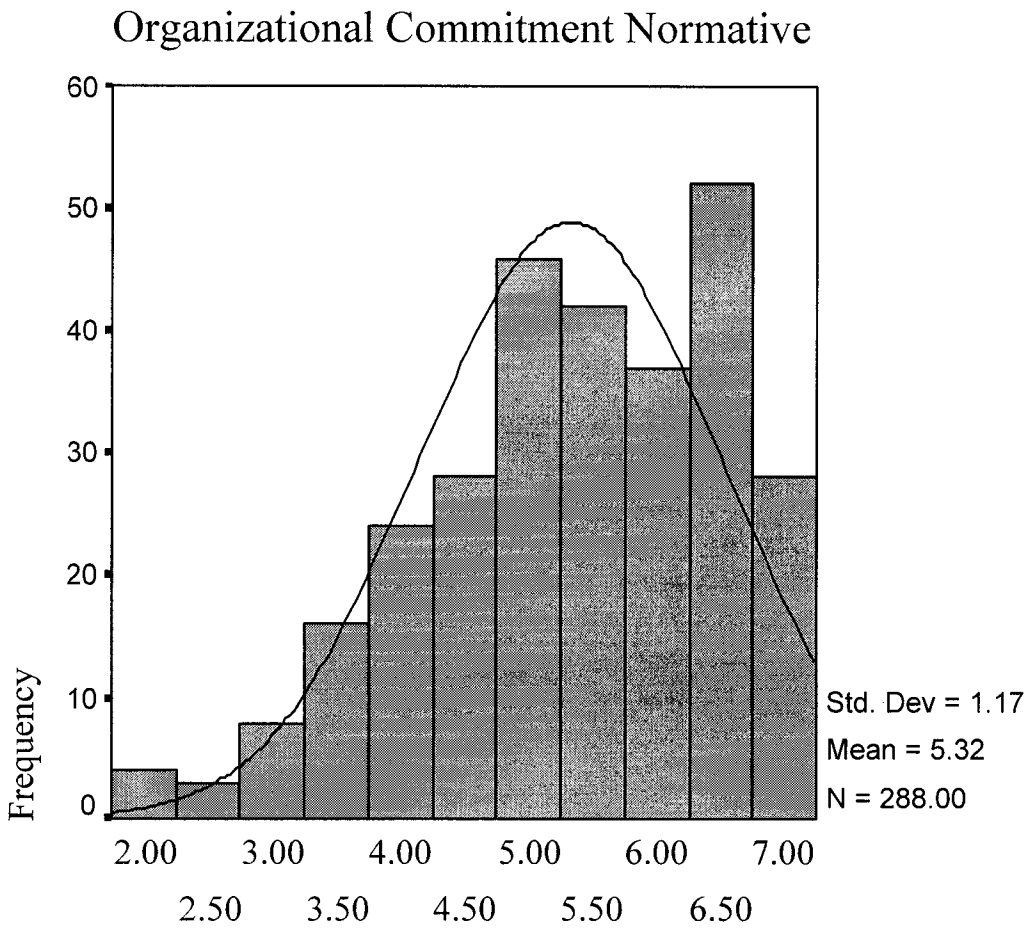
APPENDIX M

Histogram: Distribution of CEO responses organizational commitment – continuance Scale



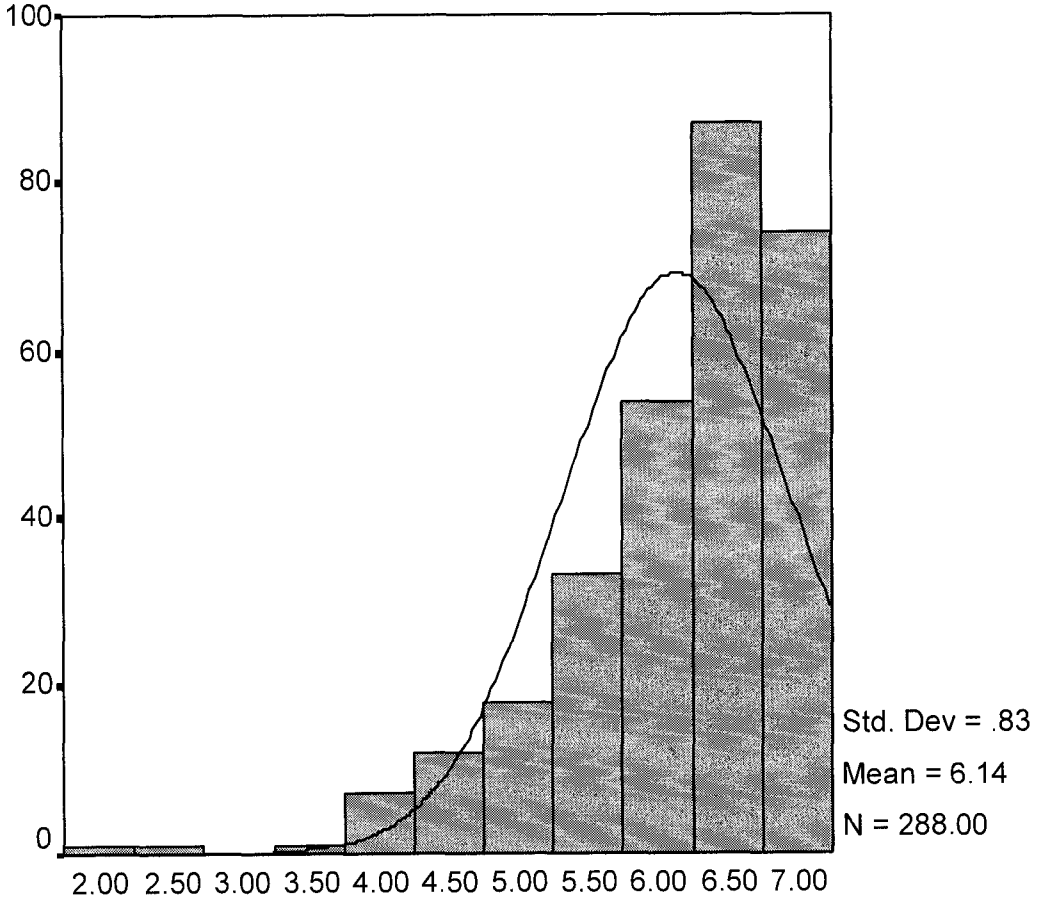
APPENDIX N

Histogram: CEO responses organizational commitment - normative scale



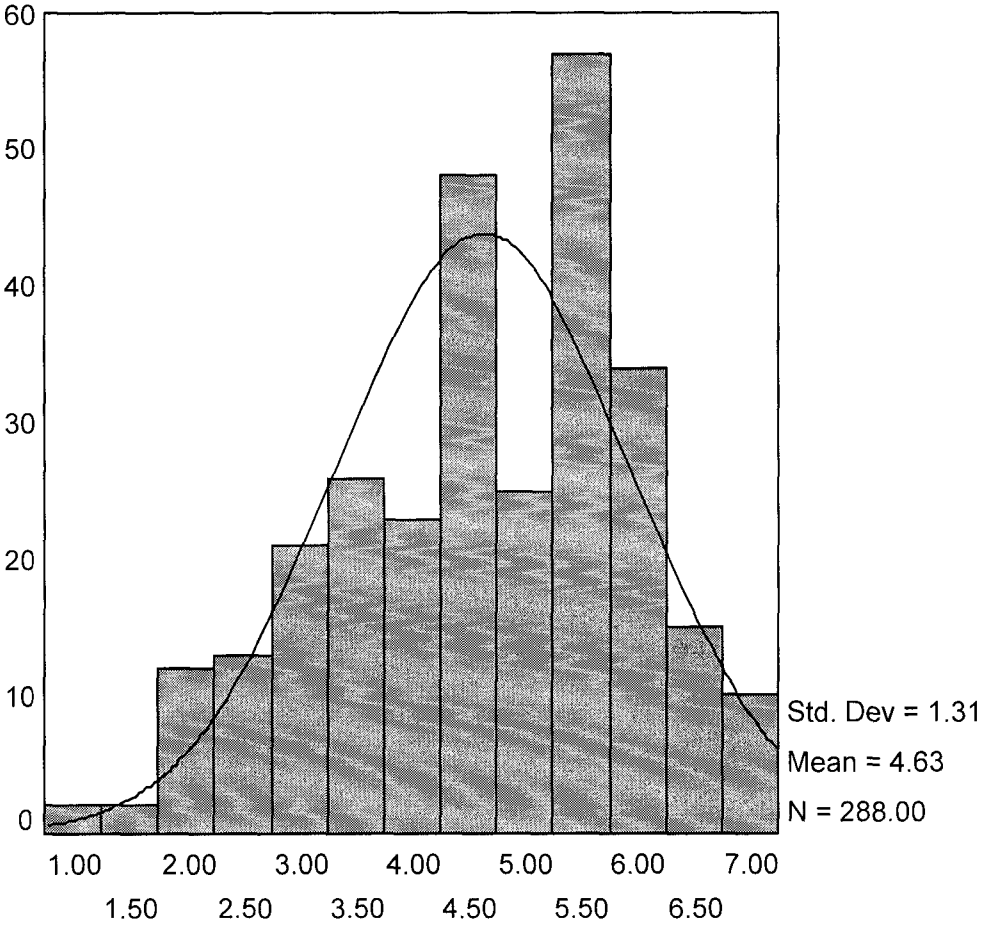
APPENDIX O

Distribution of CEO responses on occupational commitment affective scale



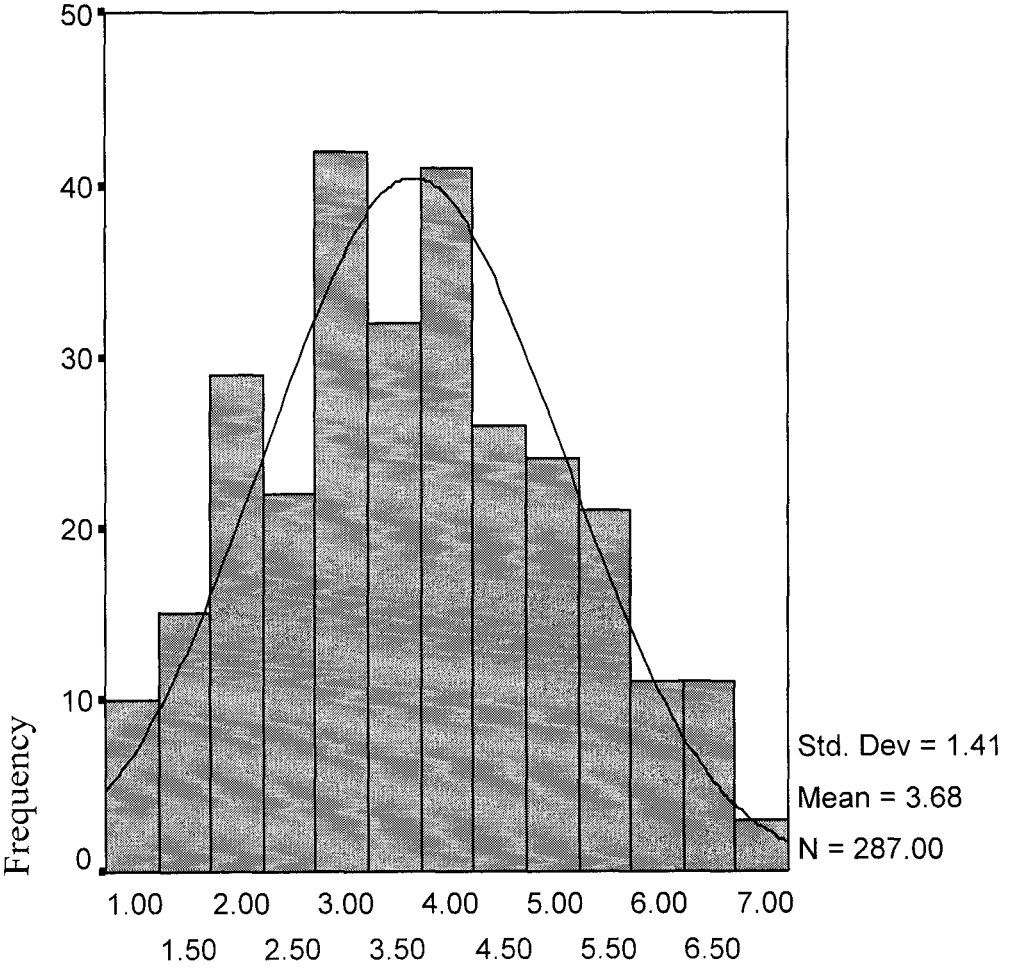
APPENDIX P

Histogram CEO responses occupational commitment - continuance Scale



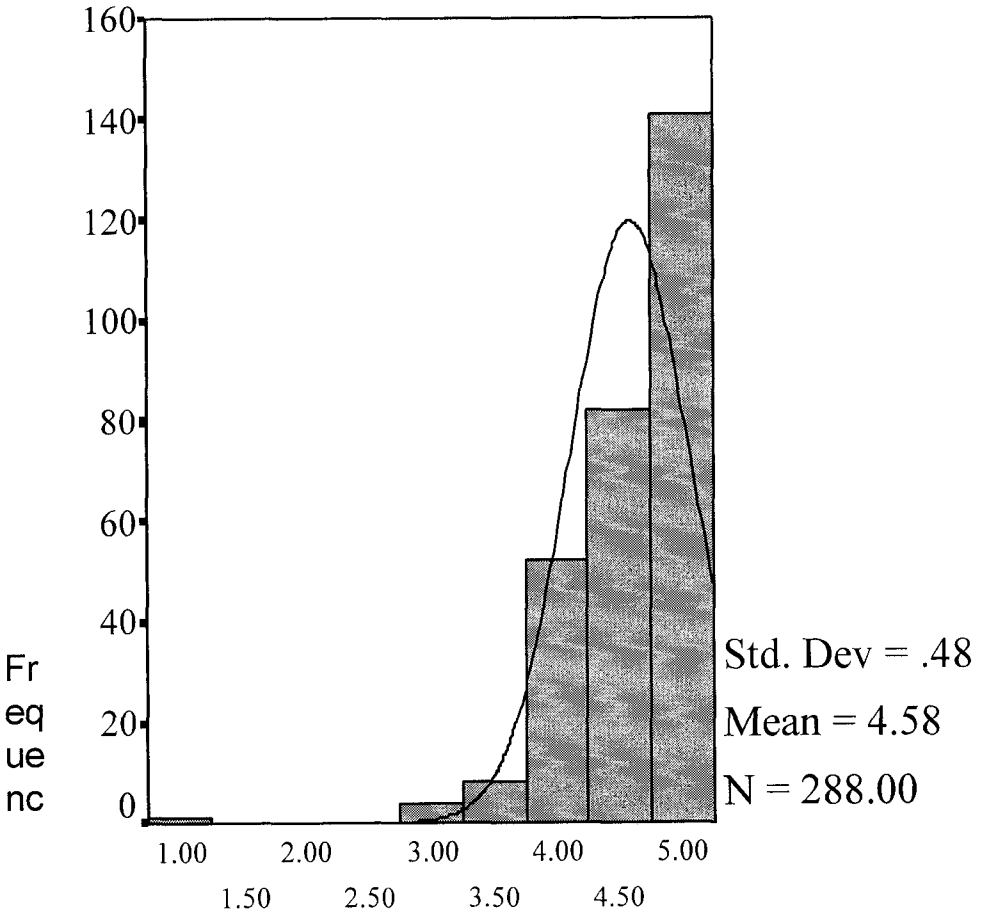
APPENDIX Q

Histogram: Distribution of CEO responses occupational commitment-normative scale



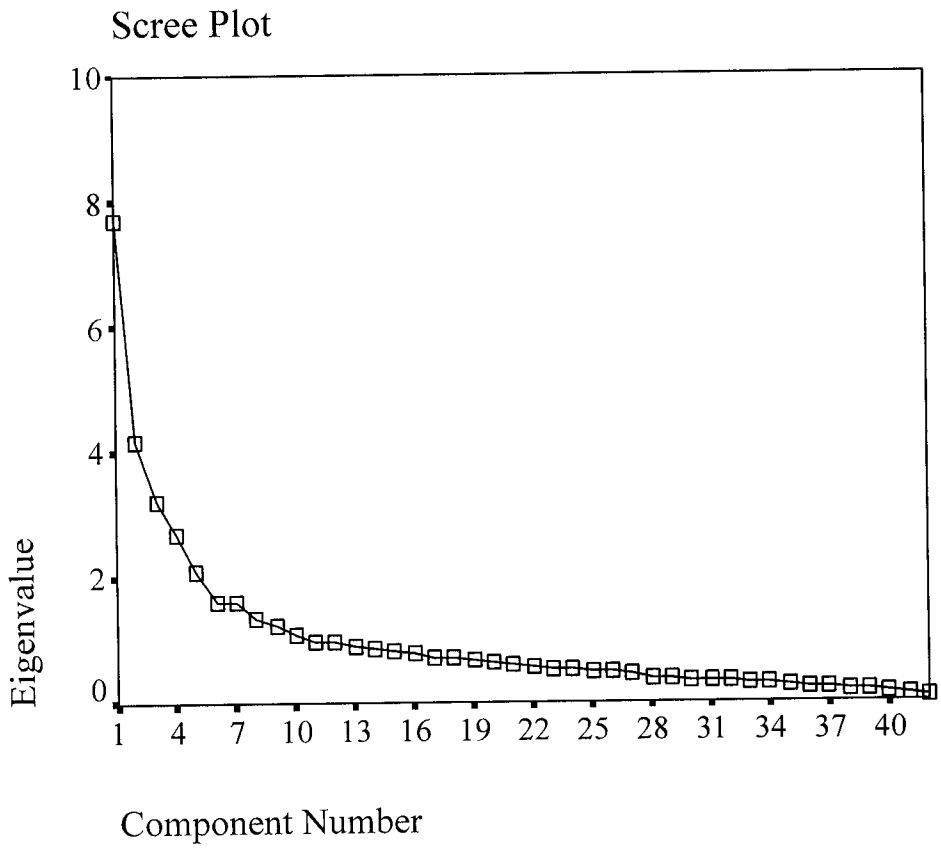
APPENDIX R

Histogram: Distribution of CEO responses organizational identification scale



APPENDIX S

Scree Plot for Principal Components Analysis



APPENDIX T

Summary of Items and Communalities PCA

Scales/item number	ITEM	Extraction
organizational affective 1	I would be very happy to spend the rest of my career with this organization	.60
organizational affective 2	I really feel as if this organization's problems are my own	.38
organizational affective 3	I do not feel like "part of the family" at this organization	.90
organizational affective 4	I do not feel emotionally attached to this organization	.51
organizational affective 5	This organization has a great deal of personal meaning for me	.59
organizational affective 6	I do not feel a strong sense of belonging to my organization	.87
organizational continuance 1	It would be very hard for me to leave this organization right now even if I wanted to.	.70
organizational continuance 2	Too much in my life would be disrupted if I decided to leave my organization now.	.64
organizational continuance 3	Right now, staying with my organization is a matter of necessity as much as desire	.47
organizational continuance 4	One of the few negative consequences of leaving this organization would be the scarcity of available alternatives.	.52
organizational continuance 5	One of the major reasons I continue to work for this organization is that another organization may not match the overall benefits I have here.	.64
organizational continuance 6	If I had not already put so much of myself into this organization, I might consider working elsewhere.	.39
organizational normative 1	I do not feel any obligation to remain with my current employer	.57
organizational normative 2	Even if it were to my advantage, I do not feel it would be right to leave my organization now.	.73
organizational normative 3	I would feel guilty if I left my organization now.	.71
organizational normative 4	This organization deserves my loyalty	.60
organizational normative 5	I would not leave my organization now because I have a sense of obligation to the people it.	.65
organizational normative 6	I owe a great deal to my organization.	.61
occupational affective1	Being a Hospital Administrator/CEO is important to my self image.	.42
occupational affective 2	I regret having entered the Hospital Administration profession	.55
occupational affective 3	I am proud to be in the Hospital Administration profession	.59
occupational affective 4	I dislike being a Hospital Administrator/CEO.	.64
occupational affective 5	I do not identify with the Hospital Administration profession	.59
occupational affective 6	I am enthusiastic about Hospital Administration.	.63

occupational continuance 1	I have put too much into the Hospital Administration profession to consider changing now	.60
occupational continuance 2	Changing professions now would be difficult for me to do.	.69
occupational continuance 3	Too much of my life would be disrupted if II were to change my profession	.82
occupational continuance 4	There are no pressures to keep me from changing profession	.63
occupational continuance 5	Changing professions now would require considerable personal sacrifice	.61
occupational continuance 6	It would be costly for me to change my profession now.	.69
occupational normative 1	I believe people who have been trained in a profession have a responsibility to stay in that profession for a reasonable period of time.	.54
occupational normative 2	I do not feel any obligation to remain in the Hospital administration profession	.64
occupational normative 3	I feel a responsibility to the Hospital Administration profession to continue in it.	.72
occupational normative 4	Even if it were to my advantage, I do not feel it would be right to leave Hospital Administration now.	.70
occupational normative 5	I would feel guilty if I left Hospital Administration	.71
occupational normative 6	I am in Hospital Administration because of a sense of loyalty to it.	.60
organizational identification 1	When someone criticizes this hospital it feels like a personal insult	.54
organizational identification 2	I am very interested in what others think about the hospital	.70
organizational identification 3	When I talk about the hospital I usually say "we" rather than "they".	.69
organizational identification 4	This Hospital's successes are my successes.	.66
organizational identification 5	When someone praises the hospital it feels like a personal compliment.	.74

Appendix U: Correlations, Hospital and CEO Demographics with scales

	# hosp	Top 2000	Top 2001	Bed Size	Type	Fac Ten	Occ Ten	Gen	A	B	C	1	2	3	4	5	6	7
# hosp	1																	
Top00	-.35*	1																
Top01	-.42*	.59**	1															
Bed size	.45**	38**	.46**	1														
Type	-.16	.10	.19**	.04	1													
Fac Ten	.01	.03	.04	.02	.00	1												
Occ Ten	.08	.05	.01	.01	.06	.37**	1											
Gen	.13*	.03	-.02	.12*	.07	.06	.37**	1										
A	.38*	.87*	.77*	.50*	.01	.82**	.08	.14	1									
B	.27	.58**	.68**	.50*	.01	.23**	.08	.07	.65**	1								
C	.28	.62**	.68**	.34**	.10	.28**	.08	.07	.65**	1.0**	1							
1	.01	.07	.03	.12*	.01	.26**	.01	.03	.01	.07	.07	1						
2	.07	.07	.02	.02	-.02	.14	.01	.07	-.14	-.03	-.03	.14*	1					
3	.12	.10	.11	.13*	-.01	-.02	.01	-.04	.18*	.07	.07	.54**	.32**	1				
4	-.07	.02	.05	.13*	.01	. 12*	.26**	-.02	.09	.02	.02	.25	.04	.21**	1			
5	.01	.07	.05	.05	.06	.15*	.19**	.13*	-.11	-.03	-.03	.06	.47**	.15**	.18**	1		
6	.09	.08	.03	.21**	.05	.09	.12*	.04	. 17*	.07	.07	.26**	.24**	.44**	.39**	.28**	1	
7	-.08	.02	.11	.07	.03	.16**	.07	.08	-.16	.00	.00	.27**	.23**	.28**	.29**	.28**	.18**	1

Note. Subtotals vary due to missing values within the category (see Table 3). # hosp: number of hospitals CEO oversees . The majority of the respondents (n=233) were responsible for one facility (see Table 2, and Appendix K), Top00: Hospitals identified as a benchmark facility in the year 2000 (based upon cost report data from 1998), Top01:

Hospitals named as a benchmark facility in the year 2001(based on cost reports from 1999), Bed Size: the number of licensed beds in the hospital. Benchmark CEO respondents tended to be from large hospitals (250 + beds), Type: Hospital Type was classified as either Not-for-profit or For Profit: The Not-for profit hospitals represented the largest group (n=265); (For profit hospitals (n=49); Facten: Facility tenure. CEO respondents tended to have more lengthy hospital tenure (see Appendix J), Occten: Occupational tenure as a CEO. The respondents tended to have a lengthy occupational tenure, the majority were over 10 years (Appendix I), Gen: gender, Respondents tended to be male (n=278), the female respondents (n=36) indicated slightly higher scores on the occupational commitment-continuance scale; A: SeniorCEO: facility tenure ≥5 years, and hospital named as benchmark in any category either year; B: Dual CEO facility tenure since 1998 (4 years) and hospital named more than once, C: Top CEO facility tenure since 1998 (4 years), and hospital named as benchmark performer, 1: Organizational Commitment-affective scale, 2: Organizational Commitment-continuance scale, 3: Organizational commitment-normative scale; 4: Occupational Commitment-affective scale, 5: Occupational Commitment-continuance scale, 6: Occupational Commitment-normative scale, 7: Organizational Identification scale. * $p<.05$; ** $p< .0$

THE RELATIONSHIP BETWEEN HOSPITAL PERFORMANCE AND CEO COMMITMENT

An abstract of a dissertation presented to the faculty of

CALIFORNIA SCHOOL OF PROFESSIONAL PSYCHOLOGY

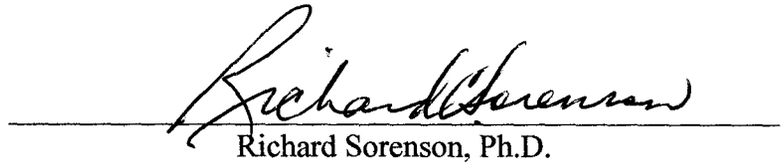
In Partial Fulfillment
of the Requirements for the Degree of

DOCTOR OF PHILOSOPHY

By

Helenmarie Carlson

Approved By:



Richard Sorenson, Ph.D.

ABSTRACT

This study was designed to explore the relationship between organizational performance and the commitment of the Chief Executive Officer (CEO). The focus of this exploratory study is the nexus of the performance of acute care hospitals operating in the United States with the organizational and occupational attachment of the Chief Executive Officer of the hospital. A demographic questionnaire and the Three-Component Measures of Organizational Commitment, and Occupational Commitment and an Organizational Identification scale were mailed to 1823 hospital CEOs.

A relationship between CEO organizational commitment, occupational commitment, organizational identification and benchmark organizational performance was not found. However, a relationship between facility tenure of the CEO and level of commitment was identified. Implications for future research, and restriction of range considerations were discussed.