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Rueckert-Hartman College for Health Professions
Final Project/Thesis

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RELATIONSHIPS OF EMOTIONAL INTELLIGENCE OF HEALTHCARE LEADERS
AND MEASURES OF EMPLOYEE SATISFACTION AND TURNOVER

by

Karen Jarman, MS

Regis University

A Master's Thesis Presented in Partial Fulfillment

Of the Requirements for the Degree

Master of Science, Health Service Administration

Regis University

December, 2008

FINAL APPROVAL OF MASTER'S PROJECT

HSA696 MASTER'S PROJECT

I have **READ AND ACCEPTED**

The Master's Project by:

Karen Jarman

Relationships of Emotional Intelligence of Health Care Leaders
and Measures of Employee Satisfaction and Turnover

Submitted in partial fulfillment of
requirements for the
Master of Science in Health Services Administration
degree at
Regis University

Primary Research Advisor: Janet Houser PhD

Date: December, 2008

Abstract

A 2007 projection of nursing shortages predicts that the United States shortage of registered nurses will be approximately 340,000 in 2020 and that the average age of a nurse will be 45. (Auergach, Buerhaus et al. 2007) Many healthcare facilities already have perennial openings for nurses, ultrasonographers, nuclear medicine technologists, and other hard-to fill positions. The cost of filling any vacancy is the subject of many articles and sleepless nights for health care administrators. Headhunters make cold calls to recruit candidates to fill their positions. And healthcare administrators are looking for a way to stop the flow of critical personal from their facilities. One such way may be through the use of emotional intelligence. Emotional Intelligence can be summarized as the ability of an individual to assess his or her own emotions and the emotions of others as well as control his or her own emotions and manage relationships. But who has emotional intelligence and how can you tell? And is it truly effective? This study examined relationships between the emotional intelligence scores of 48 health care leaders, using the Emotional Intelligence Assessment-Me Edition (EIA), and measures of satisfaction and turnover of their direct reports, using Gallup scores and turnover data.

Purpose: The purpose of this study was to examine relationships between emotional intelligence in health care leaders and measures of satisfaction and turnover of their direct reports.

Methods: This study used a descriptive correlational design. The independent variables were 1) emotional intelligence scores of healthcare leaders identified through EIA-Me Edition, a self-reporting survey, 2) employee satisfaction scores of their direct reports, using Gallup scores, and 3) the voluntary turnover data of their direct reports, using Human Resource Department data from the health systems' database. The study was quantitative and cross-sectional. A convenience sample of 66 health care leaders resulted in 48 usable sets of data. 14 were excluded

because of miscoded EI survey or failure to meet the inclusion criteria. Independent Sample T-Tests were run using the SSPS statistical program to determine relationship direction and strength. Univariate analysis of variance was used to determine P value.

Results: The study approached statistical significance ($P=.06$) and indicated relationships between levels of emotional intelligence in health care leaders and employee satisfaction and between levels of emotional intelligence in healthcare leaders and voluntary turnover.

Conclusion: The study suggests that as the emotional intelligence of health care leaders goes up employee satisfaction increases and turnover decreases. There is potential for emotional intelligence in health care leaders to be used to increase employee satisfaction and reduce turnover. This, in turn, may improve health care outcomes and organizational fiscal strength.

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Chapter 1: Introduction

On a Super Bowl Sunday, in the not-so-distant past, a flight from New York to Detroit was delayed for two hours. On arrival in Detroit, additional delays caused even more anxiety among the passengers who immediately stood up and got ready to disembark although the plane had stopped short of the gate. Faced with the difficult task of keeping the passengers in control and safe, the flight attendants had to find a way to get them to sit back down so the plane could resume taxing to the gate. They were faced with the very real possibility that by reminding the passengers of federal regulations regarding remaining seated and requiring compliance, the passengers would simply become angry, refuse to cooperate, and very likely cease to be customers of the airline. One flight attendant stepped forward and said in a lilting, sing-song voice “You’re staaaanding!” It was a playful warning and the passengers laughed and sat back down. (Goleman 1998)

This flight attendant displayed a high level of emotional intelligence (EI) in interacting with the passengers. The result was a de-escalation of tension, an emotional connection with the passengers on a positive level, and the positive results of safe and orderly disembarking and retention of customers. (Goleman, 1998)

While there is some variety in the definition of emotional intelligence, several distinctive models of EI, and a variety of purposes and uses, emotional intelligence can be summarized as the ability of a person to assess and manage his or her own emotions as well as assess and manage the emotions of others. This ability was ably demonstrated by the flight attendant. (Goleman, 1998)

Emotional intelligence can be used by healthcare organizations in a variety of settings and to address many concerns, including teamwork, productivity, talent development, and

customer satisfaction. Employees with high levels of emotional intelligence may affect efficiency, quality, and outcomes. (Cherniss, 2000) This study will address two important areas that may be affected by EI: employee satisfaction and turnover.

Purpose

The purpose of this study is to examine the relationships between EI of health care operational leaders and measures of satisfaction and turnover of their direct reports.

Professional Relevance

Employee satisfaction and turnover are important in any industry. Turnover costs have been estimated at anywhere from the equivalent of three months salary to three years salary per position, depending on the position and difficulty re-filling the position. Costs incurred can include administrative functions relating to termination, attracting applicants, entrance interviews, testing, travel/moving expenses, hiring bonuses and incentives, pre-employment administrative expenses, medical exams, orientation, training, and overtime or temporary employees needed to complete the tasks of the vacated position. Knowledge loss, a non-monetary loss, will become an increasing concern as the baby-boomer demographic approaches retirement age. In the healthcare industry, the safety and well-being of patients are directly related to the care provided by critical and hard-to-fill staff, such as nurses and technologists.

The professional relevance of this study is that if the EI of health care leaders is demonstrated to be related to employee satisfaction and turnover levels employers may take EI into consideration when recruiting and training leaders. In turn, the satisfaction levels of employees, patients, and physicians may be positively affected, as well as health care outcomes and the economic strength of the organizations.

Research Questions

This study will address the following questions:

Is the emotional intelligence of health care operational leaders associated with employee satisfaction?

Is the emotional intelligence of health care operational leaders associated with employee turnover?

Null Hypotheses

There is no association between the emotional intelligence of healthcare leaders and employee satisfaction.

There is no association between the emotional intelligence of health care leaders and employee turnover.

General Background

The *Strategic Rewards and Retention Practices in the Health Care Sector: 2006/2007 Report* by Watson Wyatt Worldwide, a global consulting firm, reported that sixty-nine percent of health care organizations are experiencing difficulty retaining critical-skill employees. This is in contrast to forty-three percent across all industries. (Watson Wyatt Worldwide, 2007) Health care leaders are searching for ways to improve retention of employees. One area which shows promise is EI. Studies have determined that the relationship between an employee and the leader who most directly supervises him or her is an important factor in employee satisfaction and turnover (Akerjordet & Severisson, 2007). If levels of EI in leaders who directly supervise employees impact the turnover/retention of those employees, the development of increased levels of EI in leaders may have a significant impact on healthcare. “The concept of emotional intelligence is derived from extensive research and theory about thoughts, feelings, and abilities

that, prior to 1990, were considered to be unrelated phenomena. Today, emotional intelligence attracts growing interest worldwide, contributing to critical reflection as well as to various educational, health and occupational outcomes.”(Akerjordet and Severissson, 2007, p 1411)

The most widely accepted models of emotional intelligence (EI) have been those of Peter Salovey and John Mayer (1990), Daniel Goleman (1995) and Reuven Bar-on (1997). However, whether it is the cognitive-based model of Salovey and Mayer, focused on performance by Goleman, or placed in the context of personality and well-being by Bar-On, all emotional intelligence models share the common core of the basic concepts of self-awareness, self-management, social awareness, and relationship management. These core concepts profess that self-awareness and self-management require individuals to not only be aware of their own strengths and limits, but to take steps each day to improve those skills. An individual must know him- or herself and make an effort to know others. The basis of social awareness and relationship management is empathy – the ability to sense and care for others’ emotions and well-being. Thus, the ability to create positive and productive relationships is imperative in leadership. (Serio & Epperly, 2006, p. 52)

In the study of EI, it is important to note that “...regardless of the theoretical framework used, researchers agree that emotional intelligence embraces emotional awareness in relation to self and others, professional efficiency and emotional management.” (Akerjordet and Severissson 2007) EI factors, including that of self-awareness, relationship management, and stress management abilities of leaders, may play a significant role in the dynamics affecting employee satisfaction and turnover. High levels of EI have been linked to transformational leadership behaviors. A 2006 study determined that there was a strong relationship between EI and

transformational leadership behavior. The authors recommended that the criteria for selection of executives include recognition of EI. (Butler & Chinowsky, 2006)

Much discussion and study have been devoted to levels of emotional intelligence and its relationship to a person's ability to rise in the corporate ranks. Additionally, many studies have been concentrated on ways emotional intelligence can be used to improve productivity in the workplace. While these areas are of great interest to organizations, an equally important concern is how emotional intelligence can be used to decrease voluntary turnover of employees in a time where employee and employer loyalty seems to be a thing of the past. With employees no longer remaining with a single employer for lengthy periods of time, it is important for leaders to accelerate the natural process of maturation through coaching and mentoring. The ideal leadership picture may resemble the "invisible" leader of Eastern philosophy, where the leader has developed his or her staff in such a way that they are able to perform well with or without the leader in attendance. In such cases, the employees are often increasingly able to develop into leaders themselves. (Latour & Hosmer, 2002, pp. 31-32)

In 1999, *First Break All the Rules* was published. It was based on over 80,000 interviews of managers by the Gallup organization. They found that although employees join companies for a variety of reasons, how long employees stay and how productive they are can be related to their relationship with their immediate supervisor (Buckingham & Coffman, 1999). According to a more recent Gallup study, "Happy employees are better equipped to handle workplace relationships, stress, and change...supervisors play a crucial role in worker well-being and engagement." (Gallup 2006)

The EI of leaders directly impacts the culture of an organization. A qualitative study on organization climate and EI identified 22 EI competencies that participants of the study felt had a

significant affect on the organizational climate. Of these, eight EI competencies constituted 75 percent of the responses. The competencies identified were: developing others, teamwork and collaboration, organizational awareness, building bonds, visionary leadership, empathy, respect, and open communication. Developing others was the EI competency identified most often. It was defined as leaders who show a genuine interest in those they are helping. (Yoder, 2005, pp. 51-52) This trait, along with most of the other EI competencies identified, are relationship building traits.

Information providing insight into causes of employee departure and tools useful for employee retention is crucial for healthcare administration as it strives to retain employees. As baby-boomers age, companies are looking for ways to stop the “knowledge drain” resulting from early retirement. Employee retention is especially critical in hard-to-replace positions such as nurses and technologists. A 2007 projection of nursing shortages predicts that the United States shortage of registered nurses will be approximately 340,000 in 2020 and that the average age of a nurse will be 45. (Auergach, Buerhaus et al. 2007) Many health care facilities already have perennial openings for nurses and technologists.

There are indications that the highest performing leaders have higher levels of EI than other leaders. EI has been directly related to self-awareness and relationship managing ability, which can translate into high-levels of team functioning. Positive leader/staff relationships can play a pivotal role in organizational success since the feelings of employees regarding their leaders may factor directly in employee satisfaction, engagement, turnover, and productivity.

Conclusion

A company's success can rest on its ability to retain quality employees and maintain high levels of employee satisfaction. Studies have shown direct correlation between employee

satisfaction and customer satisfaction, as well as employee satisfaction and productivity. Similar conclusions can be drawn regarding levels of employee satisfaction and work quality. It is easy to surmise that a company with high levels of employee satisfaction, directly impacting and raising levels of productivity, quality, and customer satisfaction, may also have fiscal success and positive health care outcomes. If levels of EI in leaders are related to employee satisfaction and turnover, this information can provide health care administrators with valuable information to increase organizational success.

Chapter 2: Literature Review

Is there a relationship between the emotional intelligence of healthcare operational leaders and measures of satisfaction and turnover of their direct reports? Points to be considered are definitions of emotional intelligence and healthcare operations, the background and development of emotional intelligence and social intelligence models, methods and measurement, emotional intelligence in leaders, employee satisfaction and turnover.

Definitions

Emotional intelligence. EI is an emerging field and multiple definitions have been used. For the purpose of this study, the definition of EI will be: The ability of a person to assess and manage his or her own emotions as well as assess and manage the emotions of others.

Personality. Personality consists of four basic parts: motivation, emotion, cognition, and consciousness.

Ability. Ability involves understanding how to do things, such as how to problem solve (Mayer, Salovey, & Caruso, 2000)

Health care operations. Health care operations include, but are not limited to, conducting quality assessment and improvement activities, population-based activities relating to public health improvement or cost reduction, case management and coordination, communication of treatment alternatives to healthcare providers or patients, healthcare professional qualification review, conducting training programs, business planning and development, cost-management and planning-analysis, business management, general administrative activities, customer service, and grievance resolution (University of Miami - Miller School of Medicine, 2005).

Medical and health services managers. Medical and health services managers plan, direct, coordinate, and supervise the delivery of health care. They are either specialists in charge

of a specific clinical department or generalists who manage a facility or system. They may handle daily operations, including managing personnel, finances, facility operations, admissions, and patient care (U.S. Department of Labor - Bureau of Labor Statistics, 2007).

Background and Development of Emotional Intelligence and Social Intelligence Models

Emotional Intelligence and Social Intelligence models make core assumptions regarding human behavior, including that human behavior is purposive, strategic, social, contextualized, developmental, creative, and imaginative. (Mayer et al., 2000)

The Law of Effect (Edward Lee Thorndike, 1905) focused on the effect behavior was trying to produce rather than the behavior itself. Following this line of thinking, Jerome Seymour Bruner (1990) asserted that individuals' own creative powers of interpretation were important in their ability to understand the world around them. Behavior was considered to be a result of that personal understanding. In order to understand motivation and purpose, attention would have to be paid to the life stage and cultural context in which the individuals were operating. Historical events, such as the Great Depression and the Civil Rights movement were instrumental in influencing behavior and developing personalities in many individuals who lived in those times (Zirkel, 2000).

Peter Salovey and John Mayer (1990), Daniel Goleman (1995) and Reuven Bar-On (1997) are the foundational influences in the development of EI models and theory. The various models are based on ability, aptitude, personality and associated competencies. Many personality traits and abilities were considered competencies, including resilience, understanding, creativity, compassion, flexibility, intuition, self-awareness, emotional management, social awareness, empathy, and problem solving (Mayer et al., 2000)

In a study by Von Krosigk, successful leaders who were interviewed demonstrated a clear understanding of themselves and others. The acquisition of integrity was considered to be a result of this understanding. Additionally, most of the leaders also demonstrated great flexibility by allowing others to do a job in a way that was most comfortable for the one performing that particular job (Von Krosigk, 2007)

Three Foundational Models

Mayer and Salovey. Mayer and Salovey have been credited with creating initial interest in EI and developing a cognitive-based model. They considered EI to consist of ability traits, such as problem solving, understanding how to convince others to do things, how to manage power relationships, and how to build group cohesiveness. They divided EI into four categories 1) emotional perception and identification (information input through the emotional system), 2) emotional facilitation of thought (using emotion to improve cognitive processes), 3) emotional understanding (cognitive processing of emotion), and 4) emotion management (emotional self-management and management of emotions in others). Emotional management was not considered a stifling of emotion, but rather an openness which allowed emotions to be experienced, if not necessarily expressed (Mayer et al., 2000) Many researchers who focused on the ability aspect of EI have either used Mayer and Salovey's categories or developed their own based on Mayer and Salovey's concepts.

Goleman. In 1994, Richard J. Herrnstein and Charles Murray wrote *The Bell Curve* stating IQ was critical in understanding social class and people were normally distributed in intelligence (seen as a bell curve). They purported that levels of intelligence accounted for why some people were poor and unemployed while others were employed and wealthy and that any change would be difficult. In 1995, Goleman wrote *Emotional Intelligence: Why it can matter*

more than IQ. The egalitarian aspects of EI and the assertion that it could be learned appealed to many, although it ran contrary to popular belief. Goleman focused on performance and his book, a best seller, popularized the concept. (Mayer et al., 2000)

Bar-On. Emotion makes up one of the four basic parts of personality (motivation, emotion, cognition, and consciousness). (Mayer et al., 2000) Bar-On placed EI in the context of personality and well being and asserted that emotional intelligence was comprised of non-cognitive capabilities, competencies, and skills that helped an individual cope with environmental demands and pressures. These competencies included: 1) intrapersonal (emotional self-awareness, assertiveness, self-regard, self-actualization, and independence), 2) interpersonal (empathy, interpersonal relationship, and social responsibility), 3) adaptability (problem solving, reality testing, and flexibility), and 4) stress management (stress tolerance and impulse control) (Bar-On, 1997). Although general mood was initially included, Bar-On later determined that mood was a facilitator and not a skill in itself. Bar-On also developed one of the first testing instruments, the Emotional Quotient Inventory (EQ-i) (Mayer et al., 2000)

Methods and Measurement

Measurement tools must have content validity for the mental aspect they measure. The content may vary widely due to the wide range of definitions of emotional intelligence and the various aspects to be measured. Scales may be divided as: ability, self-report, observer-rating and mixed (Mayer, Caruso, & Salovey, 2000)

The emotional quotient inventory (EQ-i). The EQ-i was developed by Reuven Bar-On who was interested in determining what led to work/life success. It was a self-report survey and met the American Psychological Association's standards of legitimate tests. The EQ-i had a substantial psychological background and additional supportive research. It was made up of five

sections: 1) intrapersonal - measuring self-awareness, assertiveness, and self-regard, 2) interpersonal - measuring empathy and social responsibility, 3) stress management, including problem solving and reality testing, 4) adaptability, including stress tolerance and impulse control, and 5) general mood, including happiness and optimism. Criticisms of the tool focus primarily on it being a self-reporting tool, which may produce inaccurate results if the person has an inaccurate perception of self (Mayer et al., 2000).

The emotional competence inventory (ECI). The ECI was created by Daniel Goleman and the consulting firm Hay-McBer. The ECI was a combination self-report survey and observer rating scale which may reduce subjective bias. The ECI measures 1) self-awareness, including accurate self-assessment and self-confidence, 2) social awareness, including empathy and service orientation, 3) self-management, including self-control, trustworthiness, and adaptability, and 4) developing others, leadership and communication. The ECI had a strong, practical business focus. Criticisms of this tool included that it was actually measuring how a person was perceived by others and was, therefore, measuring a person's reputation (Mayer et al., 2000)

The Mayer-Salovey-Caruso emotional intelligence test (MSCEIT). The MSCEIT was an emotional problem-solving test and did not involve self-evaluation. It measured 1) emotional perception, including identifying emotions in faces, music, and stories, 2) emotional facilitation of thought, including relating emotions to other mental sensations such as taste and color and using emotion in reasoning and problem solving, 3) emotional understanding, including knowing which emotions were similar or opposites, and what relations they conveyed, and 4) emotional management, including understanding the implications of social acts on emotions, as well as managing emotions. Criticisms of this tool included that it did not have objectively scored

answers, and that consensus scoring may not be appropriate (Mayer et al., 2000) (Alon & Higgins, 2005)

The Emotional Intelligence Assessment (EIA) instrument is based on the Goleman model and measures emotional quotient (EQ). EQ is a parallel to intelligence quotient or IQ, which is a measure of cognitive ability. EQ is a measure of emotional and socially skilled behavior. The EIA assesses four EQ competencies: 1) Self-Awareness, 2) Self-Management, 3) Social Awareness, and 4) Relationship Management. It uses 28 questions divided into the four competency categories and a 6-point frequency scale for answers. Criticisms of this model are that there may be an insufficient number of questions. The developers of this model consider the condensation and concentration of its questions as a strength of the instrument. (*Emotional Intelligence Appraisal*, 2008)

Emotional Intelligence in Leaders

The special relevance of emotional intelligence to leadership is that leadership is an emotion-laden process, both from a leader and follower perspective. Additionally, emotional intelligence may contribute to a leader's ability to successfully implement changes. If a leader is able to understand and influence follower's emotions, he or she might be able to induce followers to reassess their feelings and the manner in which they expressed them. It might also allow a leader to substitute an alternative view of the situation and a set of alternative emotions and reactions more suitable to achieving the desired goal (George, 2000).

Studies of emotional intelligence and leadership potential determined there was evidence to support the concept that EI could be used as a predictor of leadership potential. Leaders' interpersonal skills were positively related to individualized consideration, inspirational motivation, and idealized influence. Interpersonal skills and social astuteness were identified in

positive leadership practices. Strong positive correlations were found between overall EI scores and the cognitive cluster of leadership competencies (Barbuto & Burbach, 2006 (Higgs & Aitken, 2003)).

Competencies. Competencies identified with emotional intelligence in leaders included, but were not limited to, emotional self-awareness, accurate self-assessment, self-confidence, self-control, trustworthiness, conscientiousness, adaptability, achievement orientation, initiative, empathy, organizational awareness, developing others, service orientation, leadership, influence, communication, change catalyst, conflict management, building bonds, teamwork, and collaboration. (Boyatzis, Goleman, & Rhee, 2000)

Because of the different definitions of emotional intelligence, it was difficult at times to determine whether EI represented an outcome variable, such as successful resolution of emotional challenges, or an aptitude for handling such challenges. As an aptitude, EI would operate through processes or behaviors, such as emotional perception or facilitation. EI competencies would influence selection and control of coping mechanisms. Competencies should be positively correlated, such as being self-motivated, empathic, trustworthy, and adept at handling relationships rather than self-motivated alone. The individual with the first set of competencies would likely be an effective leader, while the person with self-motivation only could be ruthless and self-serving (Matthews & Zeidner, 2000)

Attraction and selection. EI may be the key to effective leadership. Employee perceptions of supervisor effectiveness were strongly related to the EI of the supervisor. The use of competency-based selection procedures for selecting high-performing employees had become standard for some organizations, such as L'Oreal. In 1993, L'Oreal implemented a competency-based selection program, which substantially increased profits due to increased productivity. A

large multinational beverage company began to use behavioral event interviews to select divisional presidents based largely on social and emotional competencies. The turnover rate dropped from 25 percent to 6.3 percent in one and a half years. The company saved almost \$3.5 million during that time period. Researchers have suggested that half of the MSCEIT score may act as significantly large predictors of supervisor ratings. These all support the inclusion and consideration of a leader's level of EI within the recruitment and selection process (Cherniss, 2000) (Kerr, Garvin, Heaton, & Boyle, 2006). Additionally, the ability to hire and mentor high-potential individuals was seen as the hallmark of a notable leader. High levels of EI facilitate the ability to attract, develop, and retain quality employees (Gandz, 2006).

Training. Inclusion of emotional intelligence in leader training could effectively improve leadership performance by improving competencies associated with emotional intelligence. Although most adults spend more waking hours at work than any other place, few individuals enter the workplace with the necessary competencies. One way to increase the level of EI in leaders would be through training programs.

There are many types of programs which may be used to improve EI in leaders. These include management training, communication and empathy training, stress management training, conflict training, self-management training, and executive coaching. Programs may use a variety of methods, including self-assessment, lecture and discussion, case studies, simulations, modeling, role playing, feedback, reinforcement, and even observations of interview of individuals, such as patients in certain types of healthcare training. Stress management and self-management training may improve self-regulation. Conflict training may help individuals learn to better manage their own reactions to de-escalate conflict situations. Conflict training may also help leaders manage emotions in others (Cherniss, 2000).

However, not all training programs are successful. Programs must be evaluated to determine their effectiveness and there has been considerable discussion as to whether or not EI can be developed (Cherniss, 2000) (Dulewicz & Higgs, 2004).

A study by Neal Ashkanasy and Marie Dashborough demonstrated that teaching about emotions and emotional intelligence in leadership courses can affect team performance. Moreover, the study asserted that emotions played a potentially important role in the understanding of organizations and extended this view to the teaching of leadership skills. These results suggested that EI could play a role in performance outcomes in leadership training (Ashkanasy & Dashborough, 2003).

In broad terms, there is an emerging consensus that EI is developable, but with differing views about the extent of development possible. Malcolm Higgs and Victor Dulewicz proposed that certain competencies, such as self-awareness, sensitivity, and influence, were more developable than others, such as conscientiousness and intuitiveness. They confirmed this utilizing the Emotional Intelligence Questionnaire (EQI) which they devised, and the EQ-i designed by Bar-On (Dulewicz & Higgs, 2004).

Employee Satisfaction

Social and emotional needs of employees are as important for work motivation as monetary incentives or threats. Studies have suggested that when leaders pay more attention to employees and demonstrate concern for their well-being, employee satisfaction levels and performance increase (Cherniss, 2000).

Teamwork and relations. The most effective teams were emotionally intelligent ones which had the competencies of inclusiveness, adaptability, assertiveness, empathy, and influence. EI teams brought their feelings into the open so they could be discussed and so the

team could see how emotions affected their performance. EI teams were sensitive to change, but not resistant to it because they understood the need for flexibility and to be able to see the opportunities made available through change (Welch, 2003)

Employees reported that leader behaviors prompted both positive and negative emotional responses in them. Positive emotions occurred when leaders displayed behaviors employees associated with effective leadership. Positive incidents were often related to the leader showing awareness of employee concerns, respect for all employees, delegating and employing open and effective communication. Employees reported high levels of respect and admiration for leaders and regarded them as positive role models when leaders consistently provided small uplifts, such as saying thank you or complementing employees on a job well done on a daily basis. Employees also reported positive emotional responses for leaders who were motivational and inspirational. These traits energized the employees and filled them with optimism. As a result of those positive emotions, employees reported high levels of job satisfaction (Dasborough, 2006) (Sunindijo, Hadikusumo, & Ogunlana, 2007).

Although negative incidents were not seen as a daily occurrence, they aroused higher levels of negative emotions, such as anger and frustration. Negative incidents included feeling leaders were too controlling, employees were forced to perform certain work activities, or leaders did not behave in the same manner they expected of the employees. Poor communication by leaders evoked the most negative emotions, including not making employees aware of important issues or speaking to them in a rude manner. Poor communication was associated with employee anger, annoyance, frustration and loathing. Employees reported feeling disappointed or even betrayed. Employees conveyed they lost respect for their leaders, felt their work environment had decayed and left their position simply to escape the leader. (Dasborough, 2006)

Productivity and quality. Leaders with positive levels of EI helped to awaken, encourage, and support creativity among employees by being able to accurately perceive and appraise the emotions of their employees and by being aware of any dissatisfaction or unhappiness early on. Being able to produce creative ideas to increase efficiency and effectiveness could be desirable in many positions. Additionally, leaders who had high levels of EI could facilitate cognitive processes underlying problem identification and opportunity recognition. Leaders could encourage positive moods in employees (optimism, confidence, expansive thinking) to promote envisioning of opportunities for improvement. Such leaders could also perceive negative moods in employees and channel them in the direction of problem recognition and solving. Leaders with high EI were also able to control their own emotions, thus encouraging employees to make improvements, gather information, and generate and modify their own ideas (Zhou & George, 2003).

Employees reported that they were motivated to work harder and were more likely to perform citizenship behaviors when they had positive interactions with leaders. Having leaders with good EI skills can boost team productivity and increase organizational effectiveness. Leaders who rated high on empathy were rated highly by others in both task leadership and relations leadership roles. However, leaders who ranked highly on cognitive abilities and complex task performance were rated highly by others on task leadership, but not relations leadership (Dasborough, 2006) (Butler & Chinowsky, 2006) (Kellett, Humphrey, & Sleeth, 2006) (Freshman & Rubino, 2004).

Employees reported losing respect for leaders following negative interactions. Employees who reported frequent negative encounters had the lowest levels of respect for their leaders. In some cases, the employees left their jobs to avoid the leaders, but in other cases, employees

elected to stay, even though they developed strong negative feelings toward their leader. Some such employees reported a desire to sabotage projects so their leader would be blamed (Dasborough, 2006).

Not all studies reported relationships between EI levels and desirable outcomes (DO), such as unit effectiveness, employee satisfaction, and willingness to expend extra effort. An empirical study of 2,411 manufacturing workers, engineers, and professional staff, surveyed using the Emotional Quotient Inventory (EQI) developed by Bar-On, found no evidence of a relationship between EI and DO. “Perceptions of unit effectiveness, satisfaction with supervision, and willingness to expend extra effort were collected, utilizing items that are included in the MLQ.” (Brown, Bryant, & Reilly, 2006, p. 337) The MLQ is an instrument developed by B. M. Bass and B.J. Avolio in 1996 for measurement of transformational leadership (TL) and other leadership elements. Job satisfaction and supervisor satisfaction were measured utilizing scales developed by J. R. Hackman and G. R. Oldham in 1980 for the purpose of measuring internal turnover intent. A series of multiple regressions were used that regressed each EI scale and subscale on each DO. Neither the overall EI scale nor the subscales predicted significant variance in any of the dependent variables (Brown et al.).

Employee Turnover

The issue of EI was critical to study in nursing leaders because leadership, leadership style, and leader relations were some of the most significant predictors of employee job satisfaction and intent to stay. The leader would set the tone, culture, and climate of a nursing unit, department, or organization. A climate of discontent or even fear, resulting in employee withdrawal or termination, could be the result of a leader with low emotional intelligence (Stichler, 2006).

Nursing shortages caused retention strategies to become critical. Leaders who fostered teamwork, collaboration, high quality nursing care, and desired outcomes were crucial. A positive relationship between staff and leaders significantly impacted staff retention. Emotional awareness was the cornerstone that underlay the ability of such leaders to be emotionally intelligent (Vitello-Cicciu, 2003) (Hogan, 2005).

Conclusions

Emotional Intelligence is still an emerging field. The lack of a single agreed-upon definition of EI and of related competencies make research somewhat fragmented. General consensus appears to be that there is a relationship between high levels of EI in leaders and many positive outcomes. However, it is not a unanimous conclusion and numerous outcomes have not been studied. Other factors, such as EI levels in employees themselves, the quality and variety of measurement instruments used and cultural and gender factors may influence study results.

Much of the research has been done in industries other than healthcare which may have different cultural and work process aspects that would impact overall results. The limited information that is available regarding EI and healthcare is almost exclusively focused on nurses and physicians. Therefore, research regarding the relationship of emotional intelligence in healthcare operational leaders and measures of satisfaction and turnover of their direct reports could provide valuable information for healthcare administrators.

Chapter 3: Method

Approach to the Problem

The approach of this study was quantitative and made use of reduction to specific variables, hypotheses, questions, and measurements. It employed a strategy of inquiry (survey and secondary data). The sample was a convenience sample of health care leaders from two closely related facilities.

Emotional intelligence. Several instruments for measuring emotional intelligence were considered, including the Emotional Quotient Inventory (EQ-i), The Emotional Competency Inventory (ECI), The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) and The Emotional Intelligence Appraisal (EIA). The EIA-Me Edition was selected for use in this study.

The EIA has been used by the majority of Fortune 500 companies representing many different industries and in multiple countries, as well as by all three branches of the United States government. The EIA was developed by Drs. Travis Bradberry and Jean Greaves, is based on the Goleman model, and measures EQ. EQ is a parallel to intelligence quotient or IQ, which is a measure of cognitive ability. EQ is a measure of emotional and socially skilled behavior. Research and validation of the EIA began in 2001 and the instrument was released to the public in 2003. The EIA-Me Edition, which was selected for this study, “has been studied in comparison to job performance in large scales studies representing hundreds of thousands of individuals from a cross-section of industries.” (*Emotional Intelligence Appraisal*, 2008, p. 8) In a representative study, 12,483 individuals took the EIA-Me Edition. Their scores were compared to their last performance evaluation. The study showed a strong connection to job performance (*Emotional Intelligence Appraisal*, p. 8). The EIA assesses four EQ competencies: 1) Self-Awareness, 2) Self-Management, 3) Social Awareness, and 4) Relationship Management.

It consists of 28 questions divided into four competency categories and a 6-point frequency scale for answers. The average administration time is 7 minutes. Scoring takes approximately 8 minutes per survey and was preformed by the researcher. Permission to use EIA was obtained by purchasing the tool from TalentSmart, Inc., the publishers of the instrument. Sixty-six surveys were purchased. This number was based on a rule of thumb for sufficient power using the number of surveys times number of competencies appraised ($15 \times 4 = 60$) and an added 10% for estimated invalid or non-returned surveys (total 66).

The EIA survey sheets were identified by Human Relations department codes, as were turnover data and Gallup scores. This allowed the data to be compiled appropriately while still de-identifying the information to eliminate researcher knowledge or bias and to protect the confidentiality of the study participants. The participants placed their own HR department codes on their individual EIA survey sheets. In each facility, an HR leader was available to provide each participant with his or her code, if needed. The survey sheets were then deposited into a locked drop box. EI scores, Gallup scores, and turnover data was later de-identified further by conversion to a secondary code.

Employee satisfaction. Measures of employee satisfaction levels were obtained from the most recent Gallup survey scores for leaders at each of the participating facilities. The Gallup survey was conducted in May, 2008 – approximately five months prior to the EI survey. Only leaders with a minimum of 5 direct reports were eligible to particulate in this study in order to obtain direct Gallup results. Leaders with fewer than 5 direct reports do not receive individual scores. Their scores are rolled up into a larger grouping. Gallup surveys are widely accepted as valid tools and have been used by both participating facilities for several years.

Employee turnover. Employee turnover data, broken down by HR department code for each leader, was obtained from the health system's data base

Research Design

The study was quantitative, correlational and cross-sectional using data obtained from the EIA survey to measure emotional intelligence of healthcare operational leaders, secondary data from Gallup for employee satisfaction levels, and turnover data from the health system's database for employee turnover. The study is correlational since it is examining relationships between emotional intelligence levels of healthcare operational leaders and measures of satisfaction of their direct reports as well as emotional intelligence levels of healthcare operational leaders and measures of turnover of their direct reports. The study was cross-sectional as it was conducted at a specific point in time rather than across time. (Creswell, 2003)

The EIA is self-reporting instrument and has closed-ended questions which are answered on a 6-point frequency scale ranging from never to always (TalentSmart, Inc., 2008). Variables identified are: emotional intelligence (independent variable), measures of employee satisfaction and turnover (dependent variables). The variables were not manipulated. Unbiased approaches were used and safeguards were in place to protect internal and external validity as well the data itself. Safeguards included, but were not limited to, voluntary participation and de-identification of leader EI survey results, Gallup scores, and employee turnover data by use of Human Relations department codes. Return of completed EI surveys was through use of locked and secured drop-off boxes.

Participation in the study was offered to all healthcare operational leaders who had at least five direct reports and were employed at either Facility A or Facility B. Both hospitals are in the same healthcare system and are located geographically within 20 miles of each other.

Facility A is a 132-bed acute care hospital employing approximately 950 people. Facility B is a 398-bed acute care hospital, employing approximately 2900 people.

Participation was voluntary. Appropriate controls for validity, participant protection, and confidential data security were in place, including, but not be limited to, protection of identity of leaders by two sets of codes, password protection of confidential electronic data and hard copies of confidential data stored in a cabinet protected by combination lock in a secured location.

Statistical analysis was conducted using the SSPS statistics program.

No historical events were identified that could result in a threat to validity. This was a cross-sectional study, so there were no maturation effects.

Measurement Strategy

Levels of Emotional Intelligence. EIA has been demonstrated to have accepted psychometric properties. Raw scores on the 6-point scale of the EIA-Me Edition used in this study demonstrated a mean of 4.21 and standard deviation of .62 for overall EQ. Raw scores in Self Awareness, Self-Management, Social Awareness, and Relationship Management were 4.16/.74, 4.05/.71, 4.50/.76, and 4.25/.78 respectively. When three versions (individual, team, and 360) were norm converted on a 1 to 100 point scale, they demonstrated a mean of 75 with a standard deviation of 10. The EIA-Me Edition demonstrates Cronbach alpha values for each of the four scales between .79 and .92 (TalentSmart, Inc., 2008). Gallup surveys have been extensively used and tested and are considered to produce reliable and valid responses and results.

Levels of employee satisfaction. Employee satisfaction levels were identified from the Gallup survey scores of the respective leaders of each facility. Employee satisfaction levels were a dependent variable for the purpose of this study.

Levels of employee turnover. Employee turnover levels were obtained from the health system database. They were available both as raw numbers and as a percent of voluntary terminations per leader unit. Voluntary terminations were employees who were passed the six month conditional period, were full-time or part-time regular employees of the health system, and who had voluntarily terminated their employment. Per Diem and temporary employees, as well as those involuntarily terminated, still in the 6-month conditional period, or retiring were excluded. Employee turnover was a dependent variable for the purpose of this study.

Method of Analysis

The number of surveys needed for sufficient power was determined by rule of thumb, calculating 15 surveys per category ($15 \times 4 = 60$). The level of emotional intelligence of the operational leaders was measured by using the EIA–Me Edition, which was scored by the researcher. Measures of employee satisfaction and turnover were secondary data obtained from the health care system database. SPSS statistical software was used for analysis. A bivariate correlational analysis was conducted using the Independent Samples T-Test. P value was determined using the univariate analysis of variance. A retrospective power analysis was run to determine actual number of surveys needed to obtain P of $<.05$, using a standard deviation of 80%. Frequency scores and descriptive statistics were examined for patterns and trends

Chapter 4: Results

Sample

The sample was a convenience sample of health care leaders at two medical centers which are geographically and demographically similar and which belong to the same health care system. An inclusion criterion for the study was the each participant was a health care leader with a minimum of 5 direct reports, which was necessary to have an individual Gallup score. The required sample size was estimated on the number of variables being studied (4 areas of competency). The response rate of the EIA surveys was 72.73 percent (48 usable surveys out of 66 distributed), which likely indicates that the sample is representative of the population.

Instrument

The EIA-Me Edition survey was used to obtain the primary data which was the Emotional Intelligence scores of health care leaders. The survey is comprised of 28 questions in four categories (Self-Awareness, Self-Management, Social Awareness, and Relationship Management) which are answered using a 6-point Likert scale ranging from never to always. The EIA-Me Edition demonstrates Cronbach alpha values for each of the four scales between .79 and .92, which higher than the .70 considered acceptable.

Variables

Primary data. Sixty-six EIA Me-Edition surveys were made available, along with an invitation to participate in the study at the conclusion of a short presentation at the end of management meetings at each of the two facilities. Of these, 62 were returned and 48 had valid HR department codes and met the inclusion criteria.

Secondary data. Gallup scores and turnover data were obtained for leaders at each facility through the health system's database.

Return rate

Of the original 66 surveys, 48 were returned as usable, resulting in a response rate of 72.73 percent. The sample is likely to be representative of the population.

Descriptive Statistics

	Total mean	Facility A mean	Facility B mean
Number of Employees	26.33	21	32.13
EI Score	84.35	85.64	82.96
Gallup	4.224167	4.350000	4.087391
Turnover	3.31	1.84	4.91
Turnover Percent	10.593750	9.540000	11.739130

Number of employees. The number of employees reporting to each health care leader ranged from 5 to 98, with a mean of 26.33 and a standard deviation of 21.738. Skewness was 1.483 with standard error of .343, indicating a great deal of variation and is positively skewed.

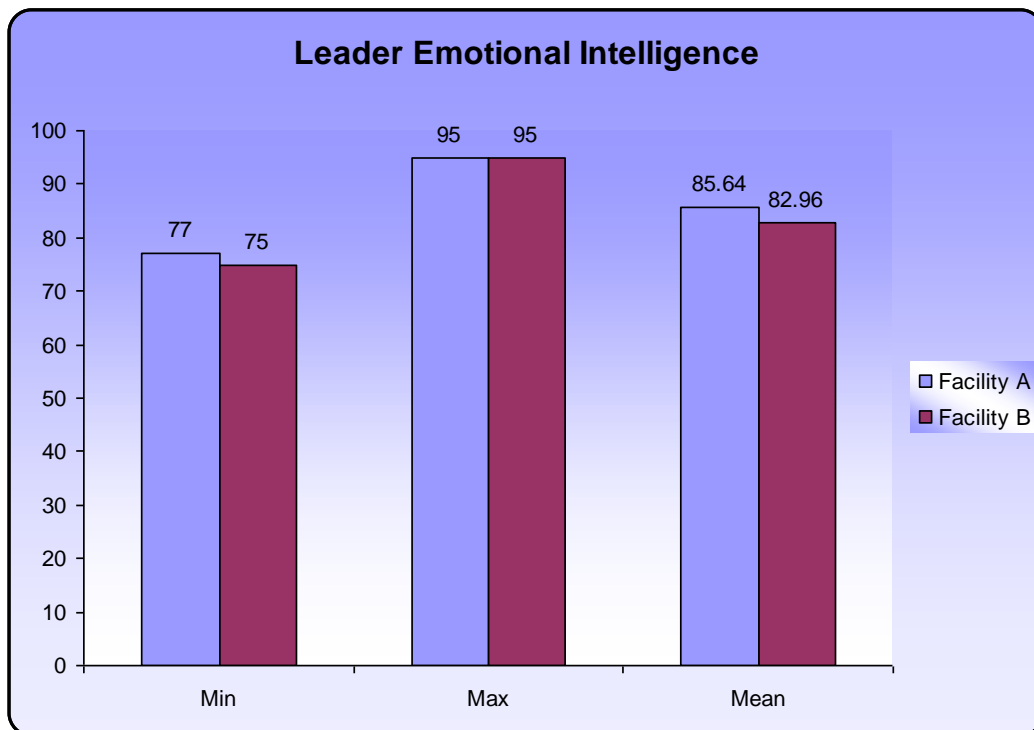
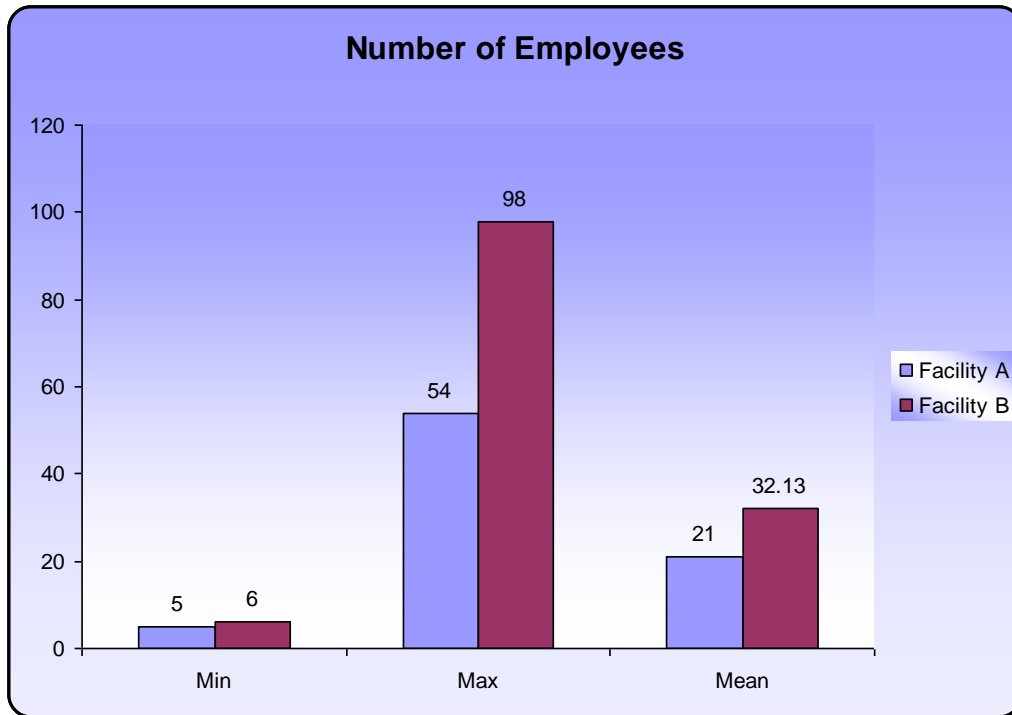
EI Score. The minimum EI score was 75 and maximum was 95, with the mean being 84.35. Standard deviation was only 5.269, with skewness of .064 and standard error of .343, indicating little variation and a generally normal distribution.

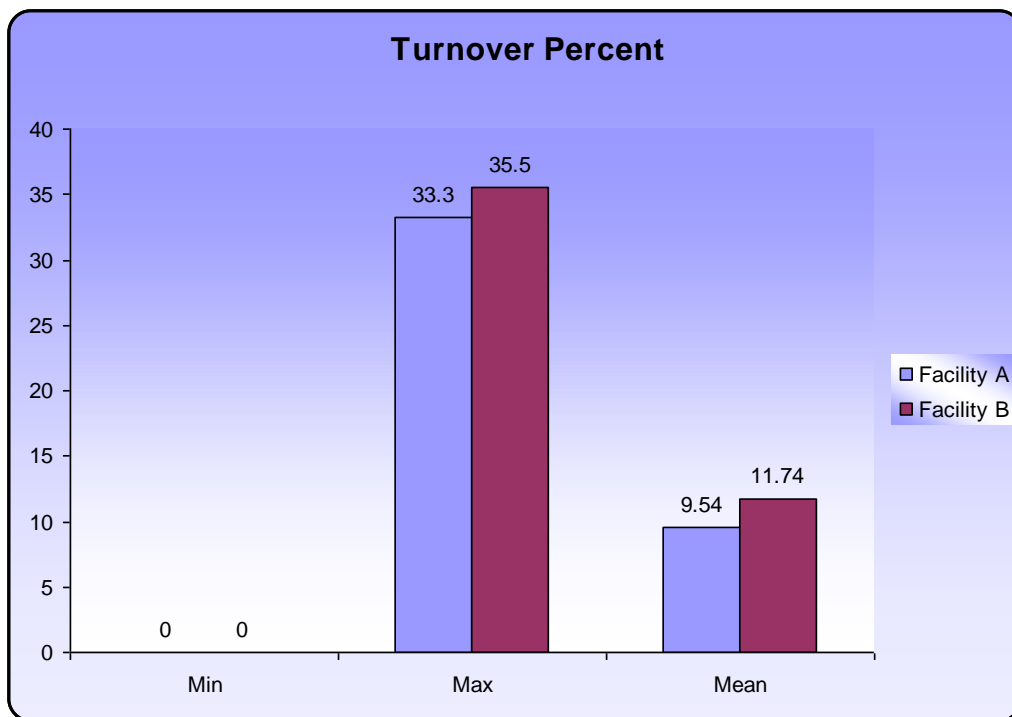
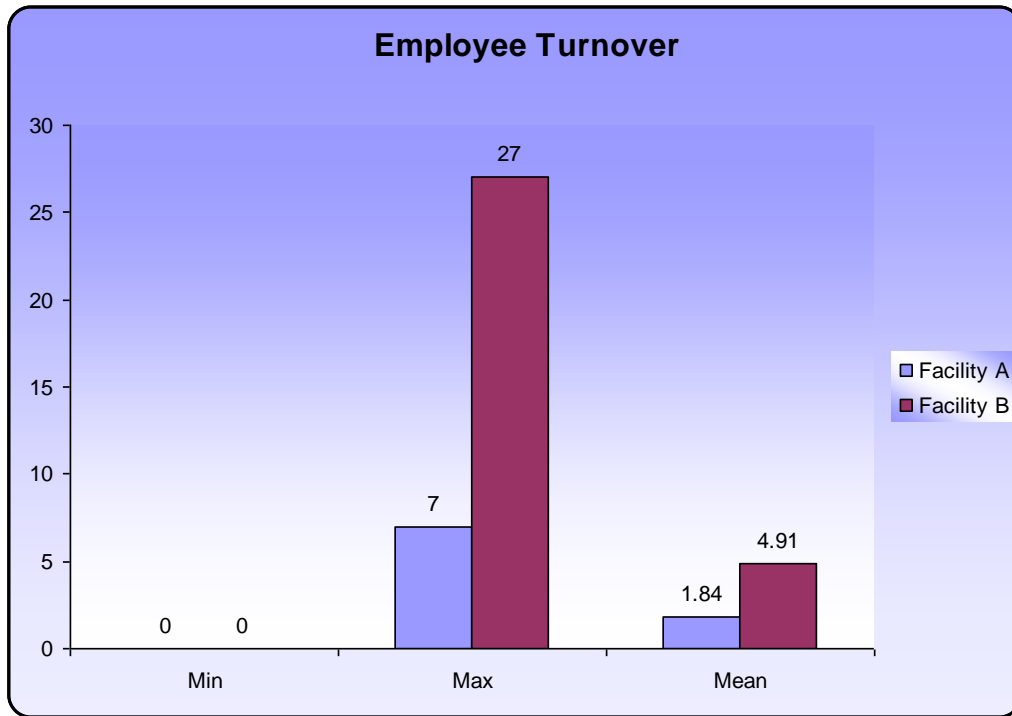
Gallup Score. The lowest Gallup score was 3.24 and highest was 5.00. The mean was 4.22 with a standard deviation of .4354. Skewness was -.441 with standard error of .343, showing normal distribution.

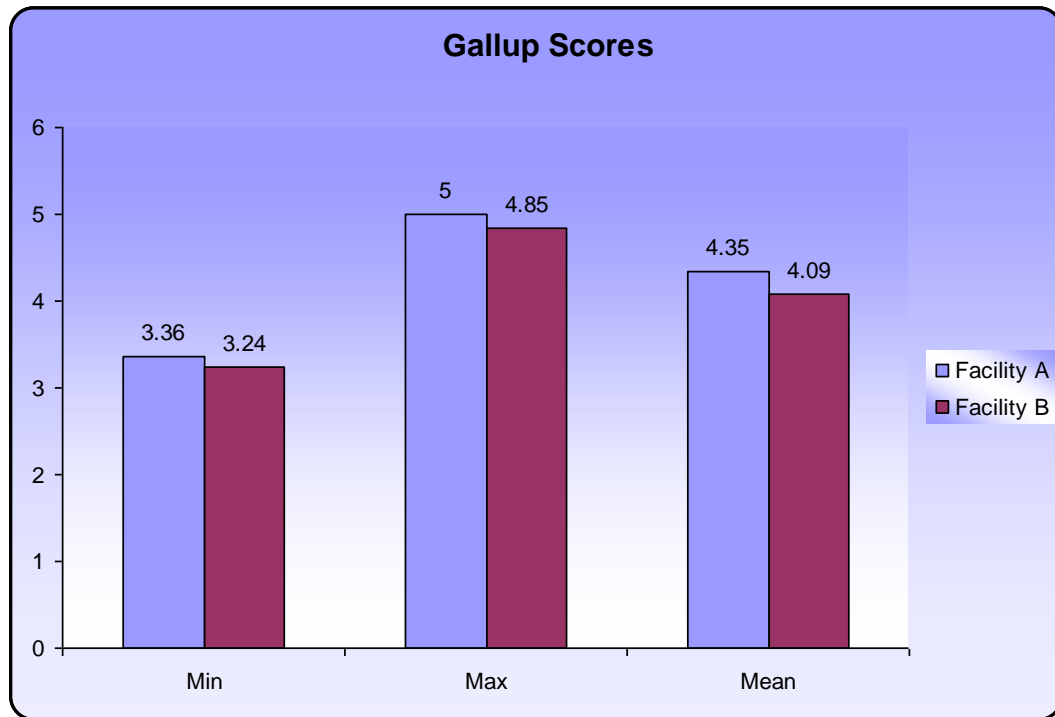
Turnover. The lowest turnover was 0 employees, and the highest was 27 employees over a period of 12 months from October 1, 2007 to September 30, 2008. The mean was 3.31, with a significant standard deviation of 5.423. The sample was very significantly positively skewed at

3.669; standard error .343. However, when using percent rather than frequencies, the minimum is 0% and the maximum is 35.3% with a mean of 10.59 and a standard deviation of 9.8647. Skewness is .948 with standard error of .343. It remains in normal distribution but is somewhat positively skewed.

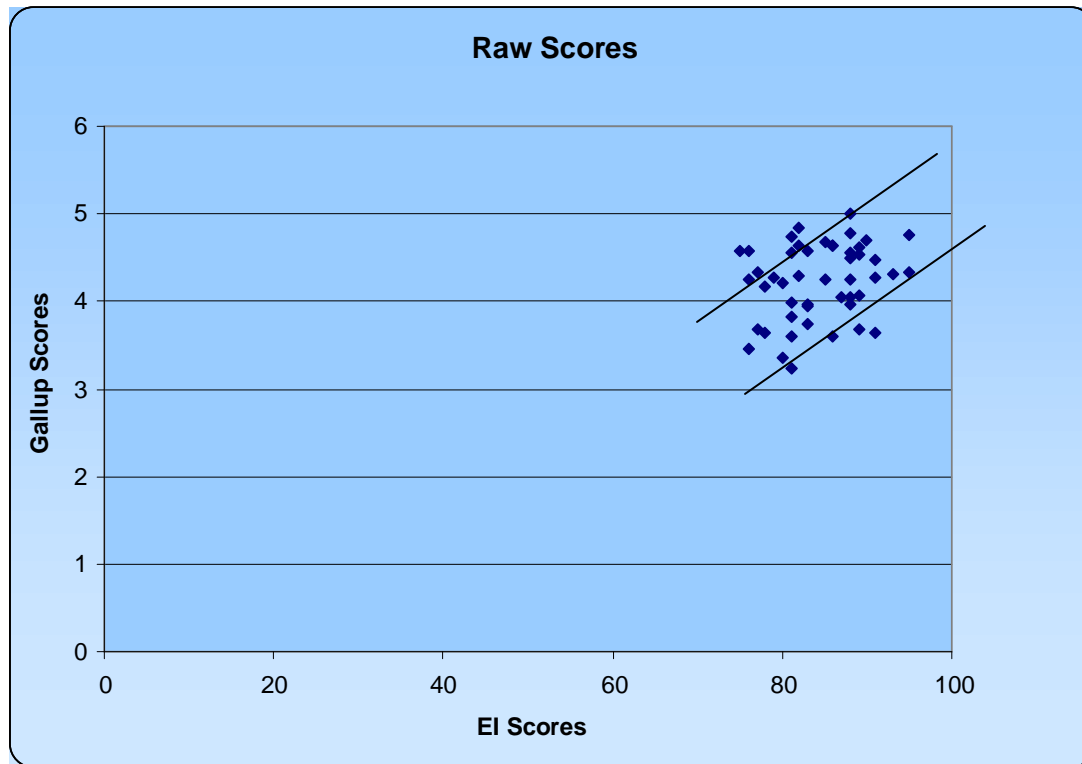
Facility Comparison. Although the purpose of the study is to determine what type of relationships may or may not exist between the emotional intelligence of health care leaders and measures of satisfaction and turnover of their direct reports, it is also interesting to look at variations between the two facilities to see if there is any difference among the descriptive statistics. Facility B has more employees per manager, with a larger standard deviation and is positively skewed. EI scores are very close, with Facility A being slightly higher (mean 85.64 and 82.96, respectively). Gallup scores are also higher in Facility A, (means 4.35 and 4.07, respectively) with a strong negative skewness. Turnover initially looks much higher in Facility B, but when compared as percent rather than frequency, the results are closer (means 9.54 and 11.74, respectively) with skewness also very close. These facilities are very similar in general.







A scattergram shows an upward trend in the EI and Gallup scores of the health care leaders, also showing indication of a positive relationship trend



Independent Samples T-Test

An Independent Samples T-Test was run to test the null hypothesis that the means of the descriptive statistics of the two facilities were equal.

Number of Employees. Null hypothesis $H_0: \bar{x}_1 = \bar{y}_2$. Alt Hypothesis $H_a: \bar{x}_1 \neq \bar{y}_2$. Since Levene's test for equality of variances is .013, which is smaller than .05, we assume that the variances are not equal. The sig. (2 tailed) is .085, which is larger than .05 ($\alpha < p$) so we do not reject the null and conclude that the results are not statistically significant and are approximately equal. Mean number of employees per manager for Facility A is 21.00 and for Facility B is 32.13. t value is -1.773. There are 33.188 degrees of freedom (df). The confidence

interval (CI) is -23.900 to 1.639, so 95 percent of the sample will fall between -23.900 and 1.639, including zero. There is no significant difference between the numbers of employees per manager for the two facilities.

EI Scores. Null hypothesis $H_0: \bar{x}_1 = \bar{y}_2$. Alt Hypothesis $H_a: \bar{x}_1 \neq \bar{y}_2$. Since Levene's test for equality of variances is .357, which is larger than .05, we assume that the variances are equal. The sig. (2 tailed) is .078, which is larger than .05 ($\alpha < p$) so we do not reject the null and conclude that the results are not statistically significant and are approximately equal. Mean EI score for Facility A is 85.64 and for Facility B is 82.96. t value is 1.804. There are 46 df and the CI is -.310 to 5.677, so 95 percent of the sample will fall between -.310 and 5.677, including zero. There is no significant difference between the EI score of leaders in the two separate facilities.

Gallup Scores. Null hypothesis $H_0: \bar{x}_1 = \bar{y}_2$. Alt Hypothesis $H_a: \bar{x}_1 \neq \bar{y}_2$. Since Levene's test for equality of variances is .004, which is smaller than .05, we assume the variances are not equal. The sig. (2 tailed) is .040, which is less than .05 ($\alpha \geq p$) so we reject the null and conclude that the results are statistically significant. The Gallup scores for Facility A are significantly higher than those for Facility B. The mean Gallup score for Facility A is 4.35 and for Facility B is 4.087. t value is 2.131. There are 37.455 df and the CI is .0130645 to .5121529, so 95 percent of the sample will fall between .0130645 and .5121529, which does not include zero. The difference between the mean Gallup scores is statistically significant with the mean Gallup score in Facility A being 4.35 and in Facility B being 4.087.

Turnover. Null hypothesis $H_0: \bar{x}_1 = \bar{y}_2$. Alt Hypothesis $H_a: \bar{x}_1 \neq \bar{y}_2$. Since Levene's test for equality of variances is .014, which is smaller than .05, we assume the variances are not equal. The sig. (2 tailed) is .063, which is greater than .05 ($\alpha < p$) so we do not reject the null

and conclude that the results are not statistically significant and are approximately equal. Mean turnover for Facility A is 1.84 and for Facility B is 4.91. t value is -1.950. There are 24.540 df and the CI is -6.322 to .175, so 95 percent of the sample will fall between -6.322 and .175, including zero. There is no significant difference between the turnover in the two facilities.

Turnover Percent. Null hypothesis $H_0: x^{-}_1 = y^{-}_2$. Alt Hypothesis $H_a: x^{-}_1 \neq y^{-}_2$. Since Levene's test for equality of variances is .534, which is larger than .05, we assume the variances are equal. The sig. (2 tailed) is .446, which is greater than .05 ($\alpha < p$) so we do not reject the null and conclude that the results are not statistically significant and are approximately equal. Mean turnover percent for Facility A is 9.540000 and for Facility B is 11.739130. t value is -.768. There are 46 df and the CI is -7.9614339 to 3.5631731, so 95 percent of the sample will fall between -7.9614339 and 3.5631731, including zero. There is no significant difference between the turnover percent in the two facilities.

Pearson Correlation

Variables are correlated if one variable's values are associated in a linear way with the values of another variable. The Pearson Correlation was used to determine if there was a relationship, and if so, at what level, between the variables in the study (EI scores, Gallup scores, turnover data). Pearson was also run to determine relationships between the study's variables and number of employees per leader.

Number of employees per leader and EI score. There is a very weak, inverse correlation between number of employees per leader and the EI score of the leader. (-.055)

Number of employees per leader and Gallup score. There is a moderate, inverse correlation between the number of employees per leader and the Gallup score of the leader. (-.521)

Number of employees per leader and turnover. There is a strong positive correlation between the number of employees per leader and the turnover experienced. (.784)

Number of employees per leader and turnover percent. There is a weak positive correlation between the number of employees per leader and turnover percent. (.213).

EI score and Gallup score. There is a weak positive correlation between EI score and Gallup score (.260).

EI score and turnover. There is a weak inverse correlation between EI score and turnover. (-.152).

EI score and turnover percent. There is a weak inverse correlation between EI score and turnover percent. (-.280)

Gallup score and turnover. There is a moderate inverse correlation between Gallup score and turnover. (-.401)

Gallup score and turnover percent. There is a very weak inverse correlation between Gallup score and turnover percent (-.062)

Turnover and turnover percent. There is a moderate positive correlation between turnover and turnover percent (.535).

Significant Correlation. Correlation is significant at the 0.01 level (2-tailed). This includes the correlation between the number of employees per leader and the leader's Gallup score (-.521), the number of employees per leader and turnover (.784), Gallup score and turnover (-.401), and turnover and turnover percent (.535).

Univariate Analysis of Variance.

Univariate analysis of variance was run to determine Sig (P value) of the study. The factor was the EI scores. The EI scores were binned to 3 levels. Level 1 = 17, Level 2 = 20, and

Level 3 = 11. An equal number per level could not be attained. The P value was .06, approaching statistical significance.

Retrospective Power Analysis

A retrospective analysis was run with a standard deviation of 80 percent and a P value of .05 to determine if the P value of .06 was due to a Type II error (incorrectly accepting the null hypothesis). The Retrospective power analysis determined that 74 usable surveys would have been needed to provide sufficient power for the study. Since a P value of .06, approaching statistical significance, was attained with only 48 usable surveys, it is quite likely that this study has a type II error which could be corrected by extending the study to obtain additional EI surveys.

Chapter 5: Discussion

The purpose of this study was to examine the relationships between EI of healthcare operational leaders and measures of satisfaction and turnover of their direct reports and to answer the following questions:

Is the emotional intelligence of healthcare leaders associated with employee satisfaction?

Is the emotional intelligence of healthcare leaders associated with employee turnover?

While the questions asked and the hypothesis put forth were not completely resolved due to the likelihood of a Type II error, the study did approach statistical significance with a 94 percent probability that the relationships were due to something other than chance. The closeness of statistical results recommends that this study be expanded in order to attain a sufficient number of EI surveys to provide appropriate power for the study. Efforts in that direction have already begun to continue and expand the study. It is anticipated that additional data may be available as early as January or February, 2009, with analysis and results soon after.

Relationships

EI score and Gallup score. There is a weak positive correlation between the EI score and Gallup score (.260). This indicates that there is some relationship between emotional intelligence scores of health care leaders and the respective Gallup scores of those same leaders and that as the level of emotional intelligence does up, so does the level of employee satisfaction.

EI score and turnover. There is a weak inverse correlation between the EI score and turnover. (-.152). This indicates that there is some relationship between emotional intelligences scores of health care leaders and the respective turnover of those same leaders, and that as the emotional intelligence of health care leaders goes up, the turnover of their direct reports goes down.

EI score and turnover percent. There is a weak inverse correlation between EI score and turnover percent. (-.280). This indicates that there is some relationship between emotional intelligence scores of health care leaders and the respective turnover percent of those same leaders, and that as the emotional intelligence of health care leaders goes up, the turnover percent of their direct reports goes down. This is a stronger relationship than when just analyzing by turnover numbers alone and is likely to be more representative since it takes into account the number of voluntary terminations in relationship to the number of employees who report to the respective leaders.

EI score and number of employees per leader. There is a very weak inverse correlation between EI score and number of employees per leader. (-.055). This indicates that while there may be some relationship between EI scores and the number of employees who directly report to the leader, it is very weak and borders on no relationship.

Overall. There is indication that as the emotional intelligence of health care leaders goes up, so does their respective Gallup scores, indicating higher levels of employee satisfaction. Additionally, as the emotional intelligence of health care leaders goes up, the levels of the turnover levels of their respective direct staff goes down.

The results of the study indicate that the levels of emotional intelligence of health care leaders are related to levels of employee satisfaction and turnover.

Strengths of the study

Strengths of the study include a strong survey return rate demonstrating that the study sample was representative of the population studied. The study did approach statistical significance with a P value of .06 and continuation and expansion of the study is anticipated to provide sufficient power to the study to attain statistical significance. The use of facilities closely

related geographically and within the same healthcare system provides stability to the study.

Appropriate controls were in place to provide both internal and external validity.

Limitations of the study

Limitations of this study included lack of sufficient controls in place to ensure adequate HR department coding of the EI studies and to ensure that leaders who fit the exclusion criteria did not receive surveys, which resulted in fewer usable studies. Another limitation of the study was the lack of the full breakdown of Gallup Scores. Only the grand means were provided and used in analysis. As the Gallup survey is broken down into 12 main questions, analysis of scores of the individual questions and components of the EI survey could have provided additional information. This might include relationships such as between the question “Does your supervisor, or someone at work, seem to care about you as a person?” and components of EI, such as managing relationships.

Contributions of study.

This study has contributed to the general body of knowledge by providing data which was previously lacking. It provides a basis for expansion and replication. Further, additional research could be conducted to answer such questions as, does EI increase with training? Is there a relationship between EI and years of experience as a leader? Is there a relationship between levels of EI in staff and turnover? It is anticipated that this study will continue and that statistical significance will be reached. If that does prove correct, and the results of this initial study hold true, then there is the potential for the use of emotional intelligence training and consideration in recruitment. This could subsequently result in improved levels of employee satisfaction and turnover, thereby improving fiscal and health care outcomes in health care organizations.

Conclusions

The study approached statistical significance ($P=.06$) and indicates that there are relationships between levels of emotional intelligence in health care leaders and employee satisfaction and turnover. Since other studies have shown a relationship between employee satisfaction and turnover, it would not be surprising to see the relationship results strengthen with sufficient power and re-analysis.

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