IS EMOTIONAL INTELLIGENCE THE KEY TO MEDICAL SALES SUCCESS?: THE RELATIONSHIP BETWEEN EMOTIONAL INTELLIGENCE AND SALES PERFORMANCE

by

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Abstract

Emotional intelligence (EI) is an area of research that has gained popularity, specifically in examining EI and its relationship to sales performance. One popular definition of emotional intelligence as cited in Bar-On's (2004) *Emotional Quotient Inventory: EQi Technical Manual* is, "[a]n array of non-cognitive capabilities, competencies, and skills that influence one's ability to succeeding coping with environmental demands and pressures" (p. 16). There has not been a tremendous amount of research that addresses the specific area of medical sales. Medical sales organizations hire representatives to generate revenue and achieve goals. If management could screen sales representatives and predict sales performance success by emotional intelligence scores, the medical sales organizations could be more successful. To better understand the relationship between emotional intelligence and sales performance, an EI instrument was used to assess the emotional intelligence of 38 sales representatives with 12 months tenure from a durable medical equipment sales organization in the Midwest, as well as 98 sales representatives that work for a variety of different pharmaceutical and medical device organizations located across the United States. This quantitative study was designed to reveal relationships between emotional intelligence as represented by indices on the Emotional Quotient Inventory (EQ-i), and actual sales performance of medical sales representatives. The sales performance measure used was actual performance rank reported by the sales representatives. The researcher hypothesized that a positive relationship exists between emotional intelligence and sales performance.

Dedication

This dissertation is dedicated to my husband, Paul Harris, who has encouraged and supported me through this process. Thank you for you for your patience and understanding how important this was to me. I would also like to thank friends and family who have listened and believed that I could complete this dissertation, and for understanding the time commitment.

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CHAPTER 1. INTRODUCTION

Introduction to the Problem

Success in sales in today's turbulent and dynamic environment requires salespeople to possess a competitive advantage (Sojka & Deeter-Schmelz, 2002). Specifically in sales arenas that require continual high growth, such as the medical sales industry (Cohen, Stolk, & Niezen, 2007; Pearce, 2008; Wettermark, Godman, Andersson, Gustafsson, Haycox, & Bertele, 2008; Young & Dixon, 2008). With aggressive growth goals, there is a need for these organizations to possess an effective sales force to achieve and exceed goals, therefore enhancing the overall organization's sales performance.

Medical sales organizations spend millions each year training and developing sales representatives, and with the changing economy, companies are expected to do more with less (Zoltners & Lorimer, 2000). Recruiting an effective sales force can be one of the most important investments a medical sales organization can make. However, if the sales forces are unproductive or if there is excessive turnover, an organization can face great losses in financial and market momentum (Walker, Churchill, & Ford, 1977). According to Cravens and Woodruff (1973), "[w]hile the needs for methods of predicting and evaluating the salesmen is great, previous research has not been particularly successful in identifying variables associated with salesmen performance" (p. 242). Sales organizations need a method to identify and screen potential candidates for sales

performance, which could be critical to the success of hiring practices and leadership development programs.

One concept that has been frequently discussed in the sales research literature that could assist in identifying and predicting successful sales performance is emotional intelligence (Van Roony, Viswesvaran, & Pluta, 2005). While there are many definitions of emotional intelligence (EI), it can often be defined as perceiving, interpreting, and reacting to emotions (Goleman, 1998). Previous research has revealed that EI is a critical skill that can enhance sales performance, and can even help salespeople adapt and cope with difficult customers (Walker et al., 1977; Weitz, Sujan, & Sujan, 1986).

Carson and Carson (1998) note that those who are loyal to their careers take work seriously in both a cognitive and a behavioral sense. Research has revealed that individuals with high levels on emotional intelligence use their reasoning to recognize and problem solve to optimize job satisfaction (Geher, Warner, & Brown, 2001; Schutte, Malouff, Hall, Haggerty, Cooper, Golden, & Dornheim, 1998). In addition, individuals that are career committed scored high in emotional intelligence, which translates into being a self-starter, controlling one's emotions, being insightful about personal decision-making processes, understanding and empathizing with the psychological needs of others, and networking (Carson & Carson).

EI is thought to be improved through learning and practice (Goleman, 1998). Weinberger (2002) proposes that if significant relationships are found between sales performance and emotional intelligence, then future research could look at the predictive power of whether this ability can be effectively trained and developed in others. Emotional intelligence is a construct that has received considerable attention in the

general leadership research area, but has been largely neglected in the sales research (Goleman, 2000; Goleman, Boyatzis, & McKee 2002).

Background of the Study

The medical sales industry was chosen for this study to measure emotional intelligence because sales representatives are rewarded by commissions based on achieving monthly objectives. There have also been several research articles that have cited the need for future research in profit sales organizations (Heffernan,O'Neill, Travaglione, & Droulers, 2008; Morehouse, 2007) The medical sales organizations spend a substantial amount of time and money on training and compensation, and having a method to screen for successful sales performance potential could be beneficial.

The organization chosen to participate in the study is a market leader in durable medical equipment sales in the Midwest. An online emotional intelligence assessment was administered through Multi-Health Systems, Inc. to 38 sales representatives. The email containing the link to the website and the demographic survey was administered by the director of human resources to assure anonymity. Assessments were coded by employee identification numbers to correlate with the participants' monthly sales rankings. Results from the emotional intelligence assessment were measured against the employee's actual sales performance. The hypothesis of the study was that sales representatives that are ranked in the Top 10% of their organization would score high on the emotional intelligence assessment.

In addition to the durable medical equipment organization, 98 sales representatives from multiple pharmaceutical and medical device companies across the

United States were randomly sent an email requesting their participation in the study. Sales performance and emotional intelligence were analyzed based on the self-reported ranking of where these representatives ranked in comparison to the rest of their organization. Again, a proposed hypothesis was that sales representatives that ranked in the Top 10% of their organizations would score higher on the emotional intelligence assessment than those representatives who did not fall in that category.

Statement of the Problem

The impact and relationship between emotional intelligence and sales performance in medical sales organizations is not known. Ignoring the role of emotional intelligence from a sales standpoint could affect the effectiveness of sales organizations. Since sales people, specifically in medical sales organizations deal with numerous interactions on a daily basis, possessing and utilizing the characteristics of emotional intelligence could be helpful.

Purpose of the Study

The purpose of this study was to determine the relationship of emotional intelligence and sales performance in representatives in medical sales organizations. This quantitative, correlational study used a survey to assess whether gender and tenure are variables in emotional intelligence scores. This information is important for researchers, human resource managers, and sales managers, as it could change the way they view the sales and recruiting process, along with leadership development programs.

Rationale

The expected outcome of this study was that there would be a positive relationship between emotional intelligence and sales performance. It would reveal how gender and tenure impacts emotional intelligence. It was also proposed that there would be a positive relationship between emotional intelligence and tenure. It was also anticipated that there would be a difference in scores between the female and male participants.

The purpose of this study was to examine the relationship between emotional intelligence (EI) and sales performance in a durable medical equipment sales company, as well as in sales representatives across multiple organizations. According to Zeidner, Matthews, and Roberts (2001), "[r]esearch attests that people with high levels of emotional intelligence experience more career success, build stronger personal relationships, lead more effectively, and enjoy better health than those with low EQ" (p. 386). One of the possible outcomes of this study is to increase its selection of successful medical sales representatives. After extensive research, the assessment tool selected to be used in this study was the online version of the EQ-i. It is an established instrument and has been successfully used in a diverse range of organizations including financial institutions, academic and clinical settings (Bar-On, 2004).

Research Questions

Two research questions were examined in this study.

Research Question 1: Is there a relationship between EI and sales performance as measured by the EQ-i in the medical sales sector?

Research Question 2: Does the relationship between emotional intelligence scores and sales performance vary based on the individual's gender or tenure within his or her organization?

Significance of the Study

There is a tremendous amount of research on emotional intelligence and studies on sales performance, but not in the medical sales arena. It would be advantageous to close the research gap, and determine whether the scores of emotional intelligence in sales representatives have a correlation with performance, whether the results reveal a positive, negative, or no relationship at all. Upon completion of this dissertation, medical sales organizations can be in a better position to develop a strategic plan as it pertains to hiring, training, increasing sales, and retaining talent. This would add to the literature on whether emotional intelligence tests could help human resources hire more qualified sales management candidates. The results of this study could also add to the growing body of research pertaining to EI and its application to strategic business initiatives. It would also be also interesting to see if emotional intelligence scores vary based on gender and tenure.

Definition of Terms

In recent years, emotional intelligence has become a new area of interest for researchers, but the construct has a detailed history and multiple definitions. The study of emotion in the workplace has evolved from two different perspectives: the sociological perspective through emotion management and the psychological perspective through

emotional intelligence (Weinberger, 2002). In 1920, Edward Thorndike, an American psychologist from Columbia University, researched social intelligence and argued that one's feelings were a type of intelligence that differed from general intelligence. Then in 1983 Howard Gardner, a Harvard professor, developed the multiple intelligence theory. Gardner's theory expanded on social intelligence and explained how intellectual activities exist independently of one another (Rozwell, Pettijohn, & Parker, 2006). However, two psychologists, Peter Salovey and John Mayer, were the first to coin the expression *emotional intelligence*. Their main focus was on three areas including appraisal and expression of emotion, regulation of emotion, and utilization of emotion as intelligence, which combined the sociological and psychological perspectives (Rozwell, Pettijohn, & Parker, 2001).

In 1995, an internationally known psychologist and author of the book *Emotional Intelligence*, Dr. Daniel Goleman developed the theory of emotional intelligence. According to Goleman's theory, there are five dimensions of emotional intelligence: self-awareness, self-management, self-motivation, empathy, and social skills (Goleman, 1995, 1998, 2000). According to Goleman (1995), without encompassing these five areas, a leader will be less effective and not reach his or her full potential.

The previously listed research by Salovey, Mayer, and Goleman helped establish the framework for the major theoretical perspectives that define emotional intelligence today. These perspectives include Salovey and Mayer's (1990) four dimensional model, Goleman's (1995, 1998) four dimensional model, Bar-On's (2004) five dimensional trait-based model, and Dulewicz and Higgs (1999, 2000) seven dimensional trait based model (McEnrue & Groves, 2006). The themes in all of the theoretical perspectives reflect a

common definition of emotional intelligence, which argues EI is "[a]n array of non-cognitive skills, capabilities, and competencies that influence an individual's ability to cope with environmental demands and pressures" (Martinez, 1997, p. 73). From these theories, many psychologists and intellectuals began actively researching and debating the importance of emotional intelligence in sales performance.

For the purposes of this study, *emotional intelligence* will be defined as "[a]n array of non-cognitive capabilities, competencies, and skills that influence one's ability to succeeding coping with environmental demands and pressures" (Bar-On, 2004, p. 16).

The term *medical sales* will be defined as an organization that sells durable medical equipment, pharmaceuticals, or medical devices.

While *sales performance* is defined as the sales representative's current ranking based on the most current annual sales report.

Salespeople will be referred to as the participants from the durable medical sales organization in the Midwest, as well as the multiple organizations that have volunteered to participate across the United States.

Assumptions and Limitations

With every research study, it is important to note study limitations. One limitation is the geographic location in the Midwest, since selling styles and other variables vary from one region to another. However, this could be helpful for other researchers to conduct research in other parts of the country. To help with this limitation, 98 additional sales representatives were recruited from multiple pharmaceutical and medical device organizations to ensure representation across the United States.

It is also important to note the "Hawthorne effect" as many participants could have responded more favorably because attention was paid to them. Thus, it was thought that research would be less biased, if the survey of demographic data and the assessment were completed online. Participants may have felt as though they did not need to undergo any additional training in an area that they already feel competent in.

Several different test instruments have been designed in order to measure the construct of EI over a relative short period of time. Although these models and measurements have received a great deal of interest, they are still considered to be evolving (Dulewicz & Higgs, 1999). As a consequence, there is still much debate amongst researchers as to how EI can be most effectively measured. From reading the established literature on emotional intelligence, it can be inferred that many of the studies have been performed as educational-based research (such as requirements for a psychology course) rather than in an organizational context (Ashkansasy & Dasborough, 2003; Newsome, Day, & Catano, 2000).

Despite the tremendous amount of research and instruments that have evolved, critics of emotional intelligence may argue that there are resonating limitations to measuring and assessing EI in an organizational setting. Dating back to 1920, defining and measuring intelligence has always been a problem. According to Thorndike (1920):

> Men talk freely about intelligence and rank their acquaintances as having very little, little, much, or very much of it. If, however, they try to state just what it is, and how it is to be measured, there is difficulty. (p. 227)

The following discussion will evaluate the limitations that are echoed in both the seminal and more current literature. The first limitation is that measuring emotional

intelligence can be difficult as there are multiple definitions of the construct (Caruso, Mayer, & Salovey, 2002; McEnrue & Grover, 2006). The second criticism revolves around self-reporting biases in the field of emotional intelligence. According to Akerjordet and Severinsson (2007), self-report devices can create self-fulfilling prophecies, which can limit the analysis of the results. In future research, it would be beneficial to incorporate different approaches such as surveys administered to the participants' managers and 360-degree feedback from co-workers. This would eliminate an inflated self-evaluation and allow for more balanced and constructive criticism for the participant. Sample size also seems to be a recurring problem in both the seminal and current literature reviewed. Subjects need to be from several sales industries and ideally located geographically across the United States, not just in one concentrated area (Morehouse, 2007).

There also needs to be more research on how individuals can develop emotional intelligence (Mayer et al., 2001). For instance, if a sales representative lacked awareness of others' emotions, how would this person further develop this aspect of emotional intelligence? The seminal and current literature syntheses reveal limitations can be resolved through additional research. Akerjordet and Severinsson (2007) posit that more research needs to be conducted in organizational contexts and how emotional intelligence is a developable trait. Further research on competency scales and a more diverse population needs to be studied to establish reliability and validity (Mayer & Salovey, 1999).

Nature of the Study

The rationale for examining this topic through the positivist lens could contribute to increasing the understanding of the phenomenon between emotional intelligence and sales performance. This methodology offers measurable, objective, and quantifiable data (Cooper & Schindler, 2008). Quantitative studies are performed to associate or to predict. For study, a quantitative study with the purpose of correlation was conducted. Its goal was to investigate the association of measures, such as is emotional intelligence associated with gender, or is emotional intelligence associated with tenure? According to Swanson and Holton (2005), "Note the question is not whether one causes the other but whether there is some association between them. The tool researchers use to investigate between two measures is correlation" (p. 40). Correlation can be positive or negative, and the strength of the association is actually indicated by how close it is to plus or minus one (Norusis, 2007).

Organization of the Remainder of the Study

Following chapter 1's introduction to the research study, chapter 2 will examine the theoretical foundation of emotional intelligence, sales performance, gender, training, and the relationship between emotional intelligence and sales performance. Chapter 3 will describe the quantitative methodological approach, the author's research style, operative paradigm, data collection, and data analysis. Chapter 4 will discuss findings and theories identified through the completion and analysis of the quantitative research. Chapter 5 will conclude the study by presenting research findings, limitations, reflections, and recommendations for future research.

CHAPTER 2. LITERATURE REVIEW

This next chapter will analyze and synthesize the recent literature regarding emotional intelligence (EI) and sales performance. This chapter is divided into subsections such as the medical sales industry, emotional intelligence, measuring EI, emotional intelligence in the workplace, gender differences, sales performance, tenure of the salesperson, emotional intelligence and sales performance, and EI training. After each discussion, there will be a discussion and rationale for why these sections are applicable to this research study.

The Medical Sales Industry

The medical sales industry has been one of the most lucrative and profitable areas of business in the United States since 2000 (Rajan, 2008). During the 1980s and 1990s, it was viewed as one of the best performing economic sectors in history (Finn & Sutherland, 2004). It is a diverse industry with blockbuster drugs and innovative technology, and for years many believed the industry was recession proof (Anonymous, 2006). Categories within this industry include pharmaceuticals, biologics, durable medical equipment, diagnostics, and medical devices. According to Hoovers in 2008, there are at least 12,000 companies involved in the manufacturing of medical sales products and equipment and have combined annual revenues of over $50 billion dollars.

However, in today's economy, even this industry is looking for ways to cut costs and maximize profits. With more government restrictions to reimbursement and additional FDA regulation, companies are finding it more difficult to achieve the high levels of profit that shareholders and investors are accustomed to (Rajan, 2008). Healthcare costs continue to rise and as insurance premiums double, more Americans are having difficulty affording these products. Along with these issues, more companies face heightened competition from generics and low cost providers, expiring patents, and a lack of products in the pipeline (Pajwani, 2004). With all of these factors, it is more important than ever to select and retain the best sales representatives, individuals that can understand the dynamics that this industry is facing. This leads to a discussion around the definition of emotional intelligence and its role to sales performance.

Emotional Intelligence

In recent years, emotional intelligence has become a new area of interest for researchers, but the construct has a detailed history. The study of emotion in the workplace has evolved from two different perspectives: the sociological perspective through emotion management and the psychological perspective through emotional intelligence (Weinberger, 2002). In 1920, Edward Thorndike, an American psychologist from Columbia University, researched social intelligence and argued that one's feelings were a type of intelligence that differed from general intelligence. Then in 1983 Howard Gardner, a Harvard professor, developed the multiple intelligence theory. Gardner's theory expanded on social intelligence and explained how intellectual activities exist independently of one another (Rozwell, Pettijohn, & Parker, 2006).

However, two psychologists, Peter Salovey and John Mayer were the first to coin the expression *emotional intelligence*. Their main focus was on three areas: appraisal and expression of emotion, regulation of emotion, and utilization of emotion as intelligence, which combined the sociological and psychological perspectives (Rozwell, Pettijohn, & Parker, 2001). Then in 1995, an internationally known psychologist and author of the book *Emotional Intelligence,* Dr. Daniel Goleman developed the theory of emotional intelligence. According to Goleman's theory, there are five dimensions of emotional intelligence: self-awareness, self-management, self-motivation, empathy, and social skills (Goleman, 1995, 1998, 2000). According to Goleman (1995), without encompassing these five areas, an individual will be less effective and not reach his or her full potential.

The previously listed research by Salovey, Mayer, and Goleman helped establish the framework for the major theoretical perspectives that define emotional intelligence today. These perspectives include Salovey and Mayer's (1990) four dimensional model, Goleman's (1995, 1998) four dimensional model, Bar-On's (2004) five dimensional trait-based model, and Dulewicz and Higgs (1999, 2000) seven dimensional trait based model (McEnrue & Groves, 2006). The themes in all of the theoretical perspectives reflect a common definition of emotional intelligence, which argues EI is "[a]n array of non-cognitive skills, capabilities, and competencies that influence an individual's ability to cope with environmental demands and pressures" (Martinez, 1997, p. 73). From these theories, many psychologists and intellectuals began actively researching and debating the importance of emotional intelligence and how to measure the construct. For the purposes of this study, emotional intelligence is an important construct to consider in the success of a sales representative in a medical sales organization.

Measuring EI

There has been considerable research conducted in measuring and assessing emotional intelligence within organizational settings. Measuring intelligence dates back to 1952 when David Wechsler developed the Intelligence Quotient (IQ) test and questioned whether emotional abilities should be considered factors of intelligence (Freshman & Rubino, 2002).

Emotional intelligence researchers have relied heavily on the use of quantitative, positivist research methods such as surveys to measure this multidimensional construct. Paper-and-pencil survey methods are the most frequently used approaches in measuring emotional intelligence, while 360-degree feedback processes are recently gaining more popularity (Barbuto, & Burbach, 2006; Moran, 2001).

A plethora of emotional intelligence measures have been developed over the past twenty years, but there is not one measure that is proclaimed to be the best (Salovey et al. 1990; Schutte et al. 1998; Stein & Staff, 2005; Weisinger 1998). Some of the more prominent measures include the Multi-factor Emotional Intelligence Scale (Salovey & Mayer, 1990), Emotional Intelligence Quotient (Dulewicz & Higgs, 1999), Mayer, Salovey, Caruso Emotional Intelligence test (Mayer, Salovey & Caruso 1999), and the Benchmark of Organizational Emotional Intelligence (Steiner & Staff, 2005). It is important to note that based on extensive research, these measurements are constantly being updated, revised, and tested to improve reliability and validity.

Despite which emotional intelligence measure is selected, one of the most important criteria in measuring and assessing emotional intelligence is establishing a baseline assessment score. This allows individuals to understand what their current

emotional intelligence scores are, and what exercises are necessary to further develop their areas of improvement. A baseline score is essential for implementing follow-up action plans to enhance development in emotional intelligence skills. Sojka and Deeter-Schmelz (2002) support this theory and recommend enhancing a salesperson's emotional intelligence through a three-step process. The first step would begin with an assessment of the individual's current level of EI to provide a baseline score. The second step would involve improving the individual's EI score by suggested exercises that focus on identified areas of improvement. The final step would be to evaluate performance for additional feedback purposes that are essential toward building stronger emotional intelligence. By establishing a baseline score, the organization can measure how emotional intelligence increase performance outcomes in the workplace (Goleman, 1998; Carson & Carson, 1998; Dulewicz & Higgs, 1999; Freshman & Rubino, 2002). Such measurement outcomes can include employee effectiveness ratings, sales quota indices, leadership capacity, career commitment and managerial advancement (Morehouse, 2007). In addition, by analyzing an individual's baseline scores, organizations can work to improve organizational behavior concepts such as absenteeism, job satisfaction, and organizational commitment.

In terms of measuring EI, Reuven Bar-On (2004), developed one of the first theories of emotional intelligence for his doctoral dissertation. Bar-On defines emotional intelligence as, "[a]n array of non-cognitive capabilities, competencies and skills that influence one's ability to succeed in coping with environmental demands and pressures" (p. 2). His model of emotional intelligence called the EQ-i encompasses five competencies including intrapersonal skills, interpersonal skills, adaptability, stress

management, and general mood. Within each of these competencies are specific skills that are linked to individual success. Intrapersonal skills include emotional self-awareness, assertiveness, self-regard, self-actualization, and independence. Interpersonal skills comprise of interpersonal relationships, social responsibility, and empathy. Adaptability consists of problem solving, reality testing, and flexibility. Stress management indicates stress tolerance and impulse control. General mood involves happiness and optimism.

In comparison to Bar-On's EQ-i instrument, Goleman proposed that emotional intelligence consisted of personal and social competence skills which encompassed self-awareness, self-regulation, motivation, empathy, and social skills. Two measurement tools are based on Goleman's EI model. The first measure developed by Goleman in 1999 is the Emotional Competency Inventory (ECI). In 2007, a newer version was created called the Emotional and Social Competency Inventory (ESCI). Goleman's second measure is the 360-degree Emotional Intelligence Appraisal.

Another popular EI measure is based upon Mayer and Salovey's emotional intelligence model which focuses on four branches of mental abilities. This measure of Mayer and Salovey's model of EI is the Mayer, Salovey, Caruso Emotional Intelligence Test (MSCEIT). The MSCEIT is based on a series of emotion-based problem-solving items modeled on ability-based IQ tests. An individual's ability is tested on each of the four branches of emotional intelligence, therefore generating a total score, as well as scores for each of the four branches.

Caruso, Mayer, and Salovey (2002) also conducted a quantitative study to examine an ability test of emotional intelligence and its relationship to personality test

variables, in order to determine the extent to which the constructs overlapped. The sample consisted of 183 men and women who took the Multifactor Emotional Intelligence Scale (MEIS) over two experimental sessions (Mayer, Caruso, & Salovey, 1999). The purpose of the study was to determine whether emotional intelligence could be measured reliably, and if it was independent of personality traits. The results supported the discriminant validity of emotional intelligence as a construct. The internal consistencies, which were measured as Cronbach's alpha, had a score of 0.95 and also possessed test-retest reliability.

The Benchmark of Organizational Emotional Intelligence (BOEI) is another EI survey method. The BOEI is a 143-item instrument administered either by paper and pencil or online, designed to measure the level of emotional intelligence in an organization as a whole and across departments, teams, or divisions (Steiner & Staff, 2005). It was developed to assess several factors based upon the belief that emotional and motivation aspects of employees at work are related to their job performance. All 143 items are Likert scales with five options and a 'Not Applicable' option allowing that item to be skipped if it did not apply to the respondent (Steiner & Staff). This measure would be helpful for an organization assessing the emotional intelligence in a salesperson, and its ease of use for administration could be combined with other measures.

The final measure to be discussed is the Swinburne University Emotional Intelligence Test (SUEIT). The SUEIT focuses on measuring EI as a trait. Schutte et al. (1997) posed this instrument as, "measuring emotional intelligence by a theoretically cohesive and comprehensive model to provide a solid foundation for a measure of individuals' current level of emotional intelligence" (p. 169). Some of the theoretically

related constructs included alexithymia, non-verbal communication of affect, optimism, pessimism, paying attention to feelings, clarity of feelings, mood repair, depressed mood, and impulsivity (Schutte et al.). The authors also hypothesized that on a valid measure of emotional intelligence there would be certain between-group differences (Schutte et al.). For example, they expected psychotherapists would score higher than psychotherapy patients, and women would score higher than men based on previous research (Schutte et al.).

The use of EI measures for career selection and retention purposes have begun to gain momentum in many organizations in the Western world (Zeidner, Matthews, & Roberts, 2004). These measures may prove to be helpful in selecting and hiring potential sales representatives in medical sales organizations. After careful analysis and evaluation of each of the EI measures mentioned, the EQ-i was selected for this research study.

Gender Differences

There has been much debate around whether emotional intelligence is an inherent ability, and whether or not it can be taught. Research indicates that emotional intelligence is not genetically acquired, but gender could play a small factor. Whether or not gender makes a difference is still being studied, but literature states how each gender differs and can capitalize on strengths such as communication and listening for women. According to Nolin and Bradford (2001):

> There is a certain amount of evidence that women may have an intuitive or genetic disposition to be better communicators than men. Women have always been the nurturers, the talkers, and the makers of homes and occupiers of kitchens

> where conversation is not only possible but also necessary. Men on the other hand have tended to take on more isolated roles, whether it be hunter-gatherers, tillers or herdsmen. (p.16)

This quote indicates how some individuals, specifically women, may have more of an innate sense of emotional intelligence from the time they are born and because of the activities they engage in. For example, Trobst, Collins, Embree (1994) found that women tend to be more supportive and possess more empathy than men. Women are also better at coping with problems and have more potential to develop their emotions (Porter & Stone, 1995).

There has been evidence that females on average have higher emotional scores than their male counterparts. In a study by Mayer, Caruso, and Salovey (1999), it was found through the Multifactor Emotional Intelligence Scale (MEIS) that women put more effort into their emotions and are more sensitive when expressing emotion. Ciarrochi, Chan, and Caputi (2000) also found that women performed higher than men on the overall intelligence score of the MEIS with undergraduate psychology students.

Research also reveals gender differences in intensity of emotions. According to Grossman and Wood (1993), females experience more personal emotions and great intensity than their male counterparts. It is important to study gender differences with this proposed study because organizations, specifically sales organizations, are seeing demographic changes with an increase of women taking on significant career roles (Offermann & Gowing, 1993). It is critical that sales organizations learn how to manage

the gender diversity of their workers. Additional research is warranted in studying emotional intelligences and gender differences.

Emotional Intelligence in the Workplace

Emotional intelligence (EI) has become popular in several disciplines such as business, education, sales, psychology, and sociology. According to Zeidner, Matthew, and Roberts (2004), in recent years research has made great strides towards understanding the usefulness of EI in the workplace. A literature review to date pertaining to EI has identified a diverse number of studies attributing EI to increased performance outcomes in the workplace. Such outcomes include employee effectiveness ratings, sales quota indices, leadership capacity, career commitment and managerial advancement (Carson & Carson, 1998; Dulewicz & Higgs, 1999; Freshman & Rubino, 2002; Goleman, 1998). During the last decade, research has linked aspects of emotional intelligence to business results. This is significant because in the past, organizations regarded emotions in the workplace caused a lack of rationality and productivity (Ashforth & Humphrey, 1995; George, 2000). Mandell and Pherwani (2003) argue that, "[w]hile society has traditionally placed a great deal of weight on academic intelligence, Bar-On (2004) argues that emotional and social intelligences were better predictors of success in life" (p. 388). Guest and Meric's (1989) research results point to the need for greater understanding and confidence in the business community about the measurement of relevant personality and character traits like emotional intelligence.

Dulewicz and Higgs (2000) conducted a literature review to focus on how the research of emotional intelligence is predominantly educational and physiological, with business as a main area for growth. They posit, "[i]n reviewing emotional intelligence it

is evident that a major driver of interest has been the failure of IQ tests to account for sufficient variance in success criteria both in an educational and organizational context" (p. 346). The authors also discuss Daniel Goleman's notion that people who have a good mix of IQ and emotional intelligence tend to be successful in their chosen profession.

This earlier literature review differs from the more recent literature review by Akerjordet and Severinsson (2007), which evaluates past research on emotional intelligence with a "[s]pecific focus on empirical and epistemological perspectives" (p. 1405). This review advocates the need for different approaches to expand the theoretical, empirical, and philosophical foundation of emotional intelligence (Akerjordet & Severinsson). This article focuses on how emotional intelligence could be beneficial to clinical nursing. It also echoes the earlier work by Dulewicz and Higgs (2000) as it encourages further research in additional professional disciplines. It is insightful because the review serves as a blueprint for this researcher to investigate the relevance between emotional intelligence and how it pertains to sales performance.

Several industries have really embraced incorporating emotional intelligence in the workplace. By utilizing this framework, these industries have been able to manage complexity and expand profitability. One industry that has embraced emotional intelligence in its number crunching arena is the accounting industry. For years, accountants have had the stigma of being unfriendly, cold, unemotional, and only concerned with the financials. However, in 2006 the American Institute of Certified Public Accountants (AICPA) recognized the importance of emotional intelligence (Abraham, 2006). Dr. Abraham investigates how this has affected the accounting industry in her paper titled, "The Need for the Integration of Emotional Intelligence Skills

in Business Education." In her work, she focused on how accountants need exceptional interpersonal and communication skills to excel in their field. It is important for accountants to get to know their customers, to have impeccable listening skills, and to understand their customer's financial goals. By clearly articulating what financial information they need to complete taxes or other financial obligations, accountants can build mutually satisfying relationships with their clients. In addition, by clear communication, they can ensure accurate information and customer loyalty.

Nursing is another industry that emotional intelligence has important implications as, "[i]t seems to lead to more positive attitudes, greater adaptability, improved relationships, and increased orientation towards positive values" (Akerjordet & Severinsson, 2007, p. 1406). Daus and Ashkanasy (2005) also argue that customer service and sales are two professions where emotional intelligence is required during customer interactions and the necessity to possess emotional abilities in dealing with others. The general improvements of the qualities mentioned in nursing are also important and relevant to the success of the sales professional. For example, in nursing it is important to have a good bedside manner and a positive attitude when dealing with patients, whereas with sales, it is important for salespeople to be able to bounce back from negativity and adapt to different situations. In both professions, building relationships is a vital aspect for success, thus emotional intelligence can be viewed as an important construct to possess.

The academic arena has also found a positive relationship between emotional intelligence and work performance. In a study by Janovics and Christiansen (2001), 176 undergraduates were assessed using the Mayer Salovey-Caruso Emotional Intelligence

Test. EI scores were correlated with job performance as assessed by supervisors' ratings of employees on items evaluating professional work duties.

Several organizations have incorporated emotional intelligence into their employee development programs. According to Goleman (1997), research indicates the value of emotional intelligence in differentiating success in organizational life. For example, Goleman argues that high IQ can make a brilliant fiscal analyst, but when an individual possesses high IQ and high EQ, that individual has the potential to be CEO. Individuals with high emotional intelligence may have a greater ability to recognize emotions in others and spread their support and understanding. Possessing the ability to empathize can create open communication that can trigger others to express their feelings and concerns. The ability to utilize empathy can lead to supportive gestures such as hugs, jokes, and other stress relieving communication (Humphrey, 2006). This type of behavior can directly result in a compassionate and encouraging work environment for other co-workers. By sharing experiences and feelings, emotional intelligence can be contagious in the workplace. This leads into a discussion of how emotional intelligence impacts leadership.

In supporting the importance of emotional intelligence in leadership, early research indicates that EI levels are higher among workplace leaders, and increase as leadership levels rise in an organization (Dulewicz & Higgs, 2006). According to Freshman and Rubio (2002), the consulting firm Hay/McBer conducted research on executive leadership styles derived from the components of emotional intelligence. Dulewicz and Higgs (2000) conducted a seven-year longitudinal study that revealed

emotional intelligence could be more important than intellect and other management competencies in business. Emotional intelligence (EI) theory provides a unified framework to study the role of emotional abilities in social functioning (Salovey & Mayer, 1990). According to Deeter-Schmelz, Goebel, and Norman (2008), high emotional intelligence can transform a good sales manager into an exceptional leader. Since people with EI are thought to direct positive emotions to high performance and redirect negative emotions to generate constructive performance goals, this would be very advantageous to possess in leadership (Law, Wong, & Song, 2002). Dulewicz and Higgs (2000) posit that leaders who have a good mix of IQ and emotional intelligence tend to be more successful than those who do not.

Several studies have reported that EI might be a good predictor of job performance. Cote and Miners (2006) discuss how emotional intelligence and job performance are positively related. This concept seems to be mentioned more frequently in the current literature than the seminal works. A large beverage firm incorporated emotional competence into their recruiting process, and reduced turnover of divisional presidents by 46 percent (Cherniss & Caplan, 2001). The examples cited demonstrate how linking emotional intelligence can align people around a shared objective and cultivate success. It is about influencing others to work cooperatively, constructively, and with mutual trust to confront and resolve difficulties and differences. This leads to a discussion on how emotional intelligence promotes organizational success.

In many of today's organizations, emotional intelligence provides the direction and stability that inspires the commitment and motivation crucial to organizational success (Maccoby, 2001). Feldman (1999) discusses how leaders with high levels of

emotional intelligence develop and apply emotions and social skills to effectively influence followers. This allows emotionally intelligent leaders to be highly adaptable, while developing stability from chaos. For example, Mayer and Salovey (2002) argue that leaders with high EI excel at promoting camaraderie within their organization, whereas those low in EI may tend to create tension and problems among colleagues. A study by Humphrey (2002) revealed that leaders who were able to empathize with their subordinates were found to be more motivational. Bono, Foldes, Vinson, and Muros (2007) support Humphrey's argument and posit that transformational leaders tend to be empathetic, and attend to the needs of their followers. In other words, leaders who are high in EI may be better equipped to communicate and promote teamwork among their peers more effectively than those with low EI.

Emotional intelligence has always been an integral part of an organization's success, but it continues to become more important as the business climate grows more complex. The more an organization understands and embraces the benefits of clear communication, integrity, and the importance of mutual trusting relationships in business, the likelier they will achieve success. In addition, emotional intelligence is needed because each day there is a stronger emphasis on relationship skills in a more service dominated economy (Lam & Kirby, 2002). The relationship between emotional intelligence and work performance was revealed through this study. It investigated to what extent, if any, emotional intelligence has on sales performance.

Sales Performance

A successful sales force is critical to the success of organizations that sell products or services (Churchill, Ford, Hartley, & Walker, 1985). Recruiting and

selecting a potential salesperson can be an expensive and time consuming process. The process of selecting, hiring, training, and lost sales when there is turnover can exceed ore than $100,000 per salesperson (Churchill, Ford, & Walker, 1997; Sager, 1990). The qualitative research article by Sujan (1999) presents a statement of opportunity that posits, "[s]alespeople who balance their street-smart intelligence across adapting, selecting, and shaping are significantly more successful and satisfied with their jobs than salespeople who focus on any one of these facets of sales intelligence" (p. 26). Sujan proposes research questions relating to the process by which salespeople's street smarts improve their performance and satisfaction, and to examine the effect of each of the three elements of street smarts on performance and satisfaction. The purpose statement for the article by Sujan conveys an emphasis in sales research on understanding salesperson intelligence and how it can be developed. This is important to the current study, as if there is a way that recruiters and managers could screen potential successful salespeople, it could save organizations tremendous amounts of revenue.

Deeter-Schmelz and Sojka (2003) conducted an exploratory qualitative study that indicated a relationship between EI and sales performance. Data was collected via one-on-one personal interviews. Each salesperson interviewed was considered to be successful in sales by company standards and each demonstrated EI skills. This research combined with the results of research investigating EI and the performance of business leaders suggests that EI may be an important factor for sales success (Dulewicz, 2000; Goleman, 1998; Sosik & Megerian, 1999).

According to Manna and Smith (2004), while sales processes and tools are becoming more technologically advanced, the importance still lies in the successful

interaction with the client. "A transactional sales representative will not have the effective personal skill set to become an effective sales representative in the near future as customers are becoming more empowered and expecting more in terms of service" (Manna & Smith, p. 67). There seems to be a human factor, which could be attributed to emotional intelligence that affects these sales interactions (Ingram, 1996). A medical sales representative needs to be able to build rapport and have effective interactions with his or her clients in order to achieve business objectives.

Age and Tenure of a Salesperson

There are many factors that contribute to the success of a salesperson. Age and tenure are two factors that have been documented in the literature (Fu, 2009; Ackerman, 1992; Ali & Davies, 2003; Avolio, Waldman, & McDaniel, 1990). Empirical studies will often use age and sales experience as control variables in studies evaluating performance (Farrell & McDaniel, 2001; Lawrence, 1996; Tesluk & Jacobs, 1998).

The impact of age and tenure on sales performance both have been documented in several performance studies (Deadrick & Madigan, 1990; McEvoy & Cascio, 1989; Struman, 2003). Although tenure and age are often positively correlated, the respective effects on performance differ. For example, in a study conducted with 314 salespeople launching a new product, Fu (2009) found that:

> [y]oung and energetic salespeople are better candidates to build a winning new product sales team. First, they achieve the first unit of sales two-and-a-half months earlier than their older counterparts. Second, they perform almost five times more effectively than salespeople who are 20 years older. However, this

> does not imply that older sales people are not appropriate for selling new products. Sales experience accumulated over the years can be a strong weapon in tackling the challenges of selling new products (p. 16)

In general, tenure is expected to have a positive effect on performance, while age is thought to have a negative effect (Fu, 2009; Ali & Davies, 2003; Quinones, Ford, & Teachout, 1995). This argument is based upon the theory that as people age, their mental and physical abilities decline, thus performance will decrease as well (Avolio, Waldman, & McDaniel, 1990). This leads to a discussion around the relationship between emotional intelligence and sales performance.

Emotional Intelligence and Sales Performance

Emotional intelligence is a construct that has received considerable attention in performance research, and is a valuable skill proven to give salespeople a competitive advantage (Ashforth & Humphrey, 1995; Dulewicz & Higgs, 2003; Goleman 2000; Goleman, Boyatzis, & McKee 2002). The suggestion that there is a relationship between emotional intelligence and sales dates back to 1920, when Thorndike claimed, "[t]he man who succeeds as a politician would commonly have done well as a salesman, hotel clerk, confidence man, or school principal" (p. 229). Based on Thorndike's claim, this demonstrates how an individual who possesses emotional intelligence can be successful in sales. Studying emotional intelligence in salespeople is compelling because several studies have reported that emotional intelligence might be a good predictor of job performance.

In general, emotional intelligence is based on positivism, and sales performance is rooted in interpretivism. According to an article by Fulmer and Barry (2004):

> Early research suggesting a minimal role for individual differences like intelligence was couched in a much simpler bargaining paradigm, from which we have long since evolved. Current experimental designs allow for much more sophisticated and complex negotiations and for manipulation of both cognitive and emotional parameters, offering a prime opportunity to extend our understanding in a new direction by exploring the role of intelligence in these more realistic situations. (p. 265)

Salespeople require a skill set that give them a competitive advantage to be successful (Sojka & Deeter-Schmelz, 2008). Emotional intelligence (EI) could be that advantage. Previous sales research indicates that possessing a high level of EI can enhance their sales performance (Walker, Churchill, & Ford, 1977). Anecdotal evidence suggests EI is particularly important to sales, where salespeople are required to be adaptive and cope with difficult customers (Weitz, Castelberry, & Tanner, 2000). EI is thought to be advantageous in sales because individuals with high levels of emotional intelligence can direct positive emotions to high performance and redirect negative emotions to generate constructive performance goals (Law, Wong, & Song, 2004).

It seems logical that EI would be beneficial in sales and performance (Sojka & Deeter-Schmelz). Carson and Carson (1998) note that those who are loyal to their careers take work seriously in both a cognitive and a behavioral sense. Individuals that are career committed scored high in emotional intelligence, which translates into being a self-starter, controlling one's emotions, being insightful about personal decision-making

processes, understanding and empathizing with the psychological needs of others, and networking (Carson & Carson, 2002).

The article, "Emotional Intelligence and Dispositional Affectivity as Predictors of Performance in Salespeople" by Rozwell, Pettijohn, and Parker (2006), concludes emotional intelligence is positively and significantly related to salesperson performance. Salespeople need high levels of emotional motivation and maturity. They should be social in nature, self-motivated, and possess the ability to accept rejection gracefully. In addition, emotional intelligence may play a large role in determining the closeness of a relationship (Jordan, Lawrence, & Troth, 2006). For example, successful salespeople may understand and incorporate empathy and self-management in selling skills, but also may find it easier to develop close relationships both personally and professionally. Emotionally intelligent salespeople may also accept rejection better and adapt to different selling environments. By having these abilities and insights on their customers, successful representatives are able to increase market share and grow sales each year.

According to Robbins and et al. (2005), emotional intelligence can benefit a sales organization through decision-making, motivation, leadership, interpersonal conflict, customer service, and avoidance of deviant work place behaviors. Other benefits of emotional intelligence include higher job satisfaction, motivation, creativity, productivity, and trust among employees. According to Rapisarda (2002), EI can improve team performance and cohesiveness, which is helpful when dealing with sales organizations.

Emotional intelligence can also help achieve positive sales results and execution of organizational goals. It also transcends into a customer-responsive culture, improved leadership and performance, personalized sales, and a culture where employers and

employees are friendly, courteous, accessible, knowledgeable, prompt to responding to customer needs, and willing to do what is necessary to please the customer. Emotional intelligence can also be used to implement positive change and effective management.

Emotional intelligence has always been an integral part of an organization's success, but it continues to become more important as the business environment grows more complex. The more a sales representative understands and integrates emotional intelligence into his or her daily activities, the more he or she will achieve success. Rozwell, Pettijohn, and Parker (2006) note, "[t]he finding that emotional intelligence is related to performance is noteworthy" (p. 122). This particular claim communicates a need for further research in the arena of emotional intelligence and sales performance.

While IQ which is considered relatively stable and unchangeable, EI can be improved through learning and practice (Goleman, 1998). The article by Sujan (1999) focuses on understanding salesperson intelligence and how it can be developed.

Assessing emotional intelligence in salespeople could lead to understanding if there is a relationship between sales performance and emotional intelligence. If the relationship is positive, the role of emotional intelligence from a selling standpoint could affect the effectiveness of sales organizations. Since sales people deal with numerous interactions on a daily basis, possessing and utilizing the characteristics of emotional intelligence could be helpful. This information is important for researchers, corporate human resource managers, and sales managers as it could change the way they view the sales process and recruiting. In addition, this proposed study can add to the literature and fill in the research gap to uncover the extent emotional intelligence has on sales performance. Emotional intelligence and sales performance have one key component in

common. Both can be improved through learning and practice, which will be discussed in the next section (Goleman, 1998).

Emotional Intelligence Training

Emotional intelligence is developed as one ages. It is a continuous learning process that requires commitment and training. For example, a 40-year old tends to be more emotionally intelligent than a 20-year old (Cherniss & Adler, 2000). Some reasoning behind how intelligence is developed is a compilation of education, work, personal experiences, training, and sets of norms and attitudes. Individuals develop varying degrees of emotional intelligence through personal experiences, and some may understand it immediately, whereas it may take others a longer time to comprehend. Although it can be developed through training and with age, developing emotional intelligence take a lifetime (Lynn, 2001).

The success of an organization with emotional intelligence training depends on its overall commitment to the process. Landale (2007) mentions a six-step process for developing skills that encompasses a) knowing what you feel, b) know why you feel it, c) acknowledge the emotion and know how to manage it, d) know how to motivate yourself and make yourself feel better, e) recognize the emotions of other people and develop empathy, and f) express your feelings and manage relationships. Engaging in these processes helps an individual decipher his or her own career goals, monitor emotions, and allows for better decision-making. These activities can all lead to a sound understanding of emotional intelligence and why it is important to incorporate it into an organization.

In Lynn's (2001) book, *50 Activities for Developing Emotional Intelligence*, she suggests that emotional intelligence will be enhanced by selecting realistic, coachable exercises that allow participants to develop leadership methods, practices, and philosophies. For example, a valuable coaching exercise might allow one member of a team to mentor another colleague who is having difficulty and needs a little extra attention. By setting clear, specific, and measurable goals, the individual who is in need of help would benefit, along with the employee who is striving to improve their abilities.

In 1979, Harvard psychologist, David McClelland, invented a motivational training program that encompassed lecture, discussion, stimulation, case studies, and action plans to achieve when the participants returned to work. Research results indicated improved performance from participants (Cherniss & Adler, 2000). However, in order for emotional intelligence training to be worthwhile, management must communicate the importance of its impact and employees must have a clear understanding of why they are undertaking such processes (Abraham, 2006). An example of this is when American Express Financial Advisors developed an emotional training program to deal with some of the conflicts that occurred while selling life insurance. Some problems that advisors were experiencing were lack of empathy and adjusting their behavior, information overload, and technical difficulties. The training program focused on Goleman's five dimensions include self-awareness, self-control, empathy, communication, and conflict management. At the end of the study, those advisors that followed the training rigorously improved their sales by 2.1 percent in comparison to those who did not participate in the training (Cherniss & Adler, 2000). By engaging in the emotional training program, advisors improved their empathy and

communication, thus improving sales results. This is just another example of how emotional intelligence can contribute to an organization's success.

Many universities are beginning to offer courses that focus on emotional intelligence. By taking psychology and management courses, young business professional are building a foundation of embracing emotional intelligence before entering the workforce (Zins, 2004). It is important to understand theories behind psychology, management and organization, and business for professionals to succeed in the workforce.

Since this learning and training is becoming more important, experts feel that educating and passing this advanced knowledge should be the responsibility of parents, mentors, and teachers. Abrahams (2007) believes that, "[b]usiness educators, in particular, have the responsibility to provide their graduates with a strong foundation in both technical and emotional training so that they will be well-rounded individuals, and hence worthy employees, effective managers, and dynamic leaders" (p. 74).

Human resources are taking a proactive role in recruiting candidates who have emotionally intelligent qualities. During interview processes, screening tools such as the Myers-Briggs Type Indicator (MBTI) and scenario role-plays may be used to determine a candidate's emotional awareness (Robbins et al., 2005). The personality test delves into four characteristics and classifies people into 1 of 16 personality types. Examples of successful companies that use MBTI in their interview screening include companies such as FedEx, Microsoft, and Sony (Robbins et al.). Management is also using emotional intelligence as an indicator to measure performance results and to help determine

succession planning. Traits that are valued include internal locus of control, positive self-esteem, high self-monitoring skills, and a willingness to take risk.

Contemporary research suggests that personality traits tend to remain highly stable over periods as long as 30 years (Costa & McCrae, 1997). While IQ remains stable, it is thought that EI can be improved through training. There is a need for more research on how individuals can develop emotional intelligence (Mayer et al., 2001). For instance, if a sales representative lacked awareness of others' emotions, how would this person further develop this aspect of emotional intelligence? The seminal and current literature syntheses reveal limitations can be resolved through additional research. Akerjordet and Severinsson (2007) posit that more research needs to be conducted in organizational contexts and how emotional intelligence is a developable trait. Verbeke et al. (2008), suggests future research with salespeople and emotional intelligence since emotional competence interacts with the general mental ability to predict salespeople's performance. Weinberger (2002) proposes that if significant relationships are found between sales performance and emotional intelligence, then future research could look at the predictive power of whether this ability can be effectively trained and developed in others. This study is expected to add to the literature in this area.

Summary

Incorporating emotional intelligence in a sales organization can help contribute to its overall success. Emotional intelligence is not passed on genetically-- it is a continual learning and training process that requires complete dedication. Companies can learn by

observing and relating real-world case studies into their own organizations. It is important to encourage employees to embrace emotional intelligence. If salespeople and employers commit to integrating emotional intelligence into their personal and professional lives, it can to lead to a lifelong journey of accomplishments and empowerment.

Emotional intelligence and its relationship to sales performance is still a relatively new concept that continues to generate intellectual curiosity and excitement. Based on this literature review, there are several limitations and gaps in the literature, which allow for new research opportunities. Some suggestions for future research with these topics include further development of theoretical and empirical knowledge on emotional intelligence, different research methods to understand how emotional intelligence could impact a sales representative's performance, and the need to use emotional intelligence as a training tool within sales education. The findings from this literature review can relate to practical solutions such as using the emotional intelligence assessments to improve a salesperson's interactions with customers and management. This researcher believes that a higher level of emotional intelligence can prove to be advantageous in a sales environment, and can lead to greater success.

CHAPTER 3. METHODOLOGY

Restatement of the Problem and Purpose

Emotional intelligence (EI) is an area of research that has gained popularity, specifically in examining EI and its relationship to sales performance. However, there has not been a tremendous amount of research that addresses the specific area of medical sales. A successful sales force is critical to the success of an organization that sells products or services. One critical component of a successful sales force is employee selection. Improved selection of sales representatives decreases excessive turnover (Walker et al., 1977). The impact of and relationship between emotional intelligence and sales performance is not known. Ignoring the role of emotional intelligence from a selling standpoint could affect the effectiveness of sales organizations. Since sales people deal with numerous interactions on a daily basis, possessing and utilizing the characteristics of emotional intelligence could be helpful.

Medical sales organizations hire sales representatives to generate revenue and achieve sales goals. It can be difficult to forecast how well a prospective salesperson will perform. If management could screen sales representatives and predict sales performance success by emotional intelligence scores, the medical sales organizations could be more successful. Previous research indicates that high emotional intelligence can be an

indicator of career success (Cote & Miners, 2006; Heffernan et al., 2008; Morehouse, 2007; Porath & Bateman, 2006). To better understand the relationship between emotional intelligence and sales performance, an EI instrument was used to assess the emotional intelligence of sales representatives from multiple medical sales organizations. The sample included 38 representatives from a durable medical equipment sales organization in the Midwest, and a randomly selected group of 98 medical sales representatives from multiple companies dispersed throughout the United States.

Research Design and Variables

The variables studied included gender, tenure, sales performance, total EQ-I Score, Intrapersonal score, Interpersonal score, Stress Management score, Adaptability score, and General Mood score.

Gender was defined as female and male. Participants selected the most appropriate choice.

Tenure was defined as the amount of time the sales representative has worked for the current positions. In order to participate in this study, a sales representative had to have a minimum of 12 months tenure in his or her current position. Sales representatives were asked to select from five categories regarding their tenure

1. 12 months
2. 12-18 months
3. 18-36 months
4. 36-60 months
5. 60 months and above

Sales performance was defined as the sales representative's self-reported rank based on their most recent annual sales report from their organization. What is your current sales performance with your organization? (Based on your most recent annual sales report, how did you rank? If you haven't received your most recent sales report, where do you believe you would rank?). Participants were selected from five categories

1. Top 10%
2. Top 20%
3. Top 30%
4. Top 50%
5. Below 50%

EQ-i Total Score was defined as the total EI score will be the total score from the 125 items from all five subscales including Intrapersonal, Interpersonal, Stress Management, Adaptability, and General Mood.

Intrapersonal Score was defined as the self-awareness and self-expression areas of emotional intelligence. Skills tested include self-regard, emotional self-awareness, assertiveness, independence, and self-actualization.

Interpersonal Score was defined as the social awareness and interpersonal relationship areas of emotional intelligence. Skills tested include empathy, social responsibility, interpersonal, and relationship.

Stress Management Score was defined as emotional management and regulation. Skills evaluated include stress tolerance and impulse control.

Adaptability Score was defined as change management. Skills evaluated include reality testing, flexibility, and problem-solving.

General Mood Score was defined as self-motivation. Skills evaluated include optimism and happiness.

The purpose of measuring the total EQ-I score as well as the individual subscale scores is that the higher the score on the Total EQ-I score as well as in each individual subscale, the more positive prediction for effective functioning in meeting the daily demands and challenges of sales. All 125 items utilize a 5-point Likert scale to measure the frequency with which the respondent believes they act in a certain way (Bar-On, 2004).

Statement of Research Questions and Hypotheses

Two research questions were examined in this study.

Research Question 1: Is there a relationship between EI and sales performance as measured by the EQ-i in the medical sales sector?

Research Question 2: Does the relationship between emotional intelligence scores and sales performance vary based on the individual's gender and tenure within his or her organization.

The following hypotheses were examined:

H1Ao: There is no relationship between one's sales performance and EI intrapersonal score.

H1Bo: There is no relationship between one's sales performance and EI interpersonal score.

H1Co: There is no relationship between one's sales performance and EI stress management score.

H1Do: There is no relationship between one's sales performance and EI adaptability score.

H1Eo: There is no relationship between one's sales performance and EI general mood score.

H2Ao: There is no relationship between one's sales performance and EI intrapersonal score for males.

H2Bo: There is no relationship between one's sales performance and EI intrapersonal score for females.

H2Co: There is no relationship between one's sales performance and EI interpersonal score for males.

H2Do: There is no relationship between one's sales performance and EI interpersonal score for females.

H2Eo: There is no relationship between one's sales performance and EI stress management score for males.

H2Fo: There is no relationship between one's sales performance and EI stress management score for females.

H2Go: There is no relationship between one's sales performance and EI adaptability score for males.

H2Ho: There is no relationship between one's sales performance and EI adaptability score for females.

H2Io: There is no relationship between one's sales performance and EI general mood score for males.

H2Jo: There is no relationship between one's sales performance and EI general mood score for females.

H2Ko: There is no relationship between one's sales performance and EI intrapersonal score for newer employees.

H2Lo: There is no relationship between one's sales performance and EI intrapersonal score for veteran employees.

H2Mo: There is no relationship between one's sales performance and EI interpersonal score for newer employees.

H2No: There is no relationship between one's sales performance and EI interpersonal score for veteran employees.

H2Oo: There is no relationship between one's sales performance and EI stress management score for newer employees.

H2Po: There is no relationship between one's sales performance and EI stress management score for veteran employees.

H2Qo: There is no relationship between one's sales performance and EI adaptability score for newer employees.

H2Ro: There is no relationship between one's sales performance and EI adaptability score for veteran employees.

H2So: There is no relationship between one's sales performance and EI general mood score for newer employees.

H2To: There is no relationship between one's sales performance and EI general mood score for veteran employees.

Rationale and Description for Quantitative Approach Research Design

There is continuous debate regarding which methodological approach is superior when conducting research. Bartunek and Seo (2001) argue, "[r]esearchers' methodological approaches affect how they understand the phenomena they study and the possibilities that they will move beyond their initial understandings of these phenomena" (p. 240). This means that the research methodology selected is essential to understanding outcomes, and for the purpose of this dissertation, studying the relationship between emotional intelligence and sales performance.

A quantitative approach was selected for this study, as it focuses on testing theory through standardized measurement (Bartunek & Seo, 2001; Creswell, 2003). Quantitative research is generally experimental, non-experimental, quasi-experimental, correlational, or descriptive. This suggests that the main purpose of quantitative research is to examine large groups and make generalizations across multiple settings (Miles & Huberman, 1994; Swanson & Holton, 2005). A quantitative study's main purpose is to describe, explain, and predict theory and analyze casual relationships. For the purpose of this proposed study, a quantitative correlational study was conducted.

The potential outcome benefits of conducting quantitative research include the ability to generalize results, replicate studies, and the timeliness of analyzing data. Due to the positivist philosophical assumptions, quantitative research tends to be more straightforward than qualitative and mixed methods (Bryman, 2007). Quantitative methods, like surveys, allow for data standardization. Quantitative approaches utilize fixed designs, standard instruments, and focus on deductive knowledge, whereas,

qualitative approaches utilize a flexible design, use unstructured instruments, and focus on inductive knowledge. Quantitative explanations are generalizable. In other words, it can provide comparative analysis across subsets of the chosen sample so trends and classifications are recognized (Cooper & Schindler, 2008). The quantitative approach tends to be reliable and valid, since quantitative research has an established set of rules governing validity (Sechrest & Sidani, 1995). For instance, the quantitative approach relies on previous developed theories and results from past research.

Selecting the proper methodology is a complex and time-consuming process that requires preparation and planning (Harrington & Li, 2001; Kotler & Keller, 2006). Creswell (2003) recommends before designing an approach, it is important to conceptually analyze the research question, develop an outline of topics, and anticipate potential ethical issues that may arise. Before choosing a particular methodology, it is essential that a researcher assess the four elements of the research process. These include research methods, methodology, theoretical perspective, and epistemology (Crotty, 1998).

A quantitative research method was selected to examine the relationship between emotional intelligence and sales performance. This study was a correlational survey design. Emotional intelligence researchers have relied heavily on the use of quantitative, positivist research methods such as surveys to measure this multi-dimensional construct. Paper and pencil survey methods are the most frequently used approaches in measuring emotional intelligence, while 360-degree feedback processes are recently gaining more popularity (Barbuto & Brach, 2006; Morand, 2001).

Statistical analysis was conducted with SPSS software to determine if a relationship exists between emotional intelligence and medical sales performance. Descriptive statistics were used to analyze data from the demographic survey. This allows for describing and assessing relationships between the variables (Norusis, 2007). The variables that were studied included: gender, tenure, sales performance, total EQ-I Score, Intrapersonal score, Interpersonal score, Stress Management score, Adaptability score, and General Mood score.

The EI instrument that was utilized for this study was the Bar-On EQ-i online assessment. In testing for significant difference between the participants' overall and subscale EI scores, two-tailed tests of independent means were conducted. A total of six *t* tests were conducted, one each for the overall score and five EI subscale scores. SPSS Student Version was utilized. Since multiple *t* tests were conducted, the Bonferroni correction factor was conducted (Norusis, 2007).

In choosing a design for this research study, past studies of similar content were assessed and examined. A study by Michelle Morehouse (2006), titled, "An Exploration of Emotional Intelligence Across Career Arenas" also utilized the online version of the Bar-On EQi instrument. In her study, Morehouse compared the relationship between emotional intelligence scores of leaders in non-profit health and human service agencies versus leaders in profit businesses. Morehouse also used *t* tests to compare the total EI scores versus each of the five subscales.

Sample

As identified previously, for the purposes of this study the sample populations were sales representatives in multiple medical sales organizations. The sample for this study was 38 sales representatives with 12 months tenure in a durable equipment medical sales organization located in the Midwest, as well as 98 sales representatives that work for a variety of different pharmaceutical and medical device organizations.

Time and budgetary constraints regulate the feasibility of the sample frame being drawn from a larger target population (for example, all of the pharmaceutical and medical device organizations in the United States). The proposed sample frame of the case study of the medical sales organization can be theoretically identified as a) adequate, participants within this sample are identified as having the knowledge to complete the survey and online assessment and b) homogeneous and representative of other medical sales organizations. Past research has indicated that future research may benefit from using sample groups that are larger and more equitable in homogeneity, such as profit businesses with greater similar characteristics (Morehouse, 2007).

Mandell and Pherwani (2003) note that research on gender differences in emotional intelligence has been limited, and there is a need for additional research in this area. Lam and Kirby (2002) argue that there are opportunities for future explorations of significant gender differences in the individual components of emotional intelligence as well as in overall emotional intelligence scores in other career arenas. This study sought out to find such differences, so it is advantageous to explore and understand the nature and sources of those differences through conducting this study.

Sample Design

This quantitative study examined the relationship between emotional intelligence and sales performance. Sales representatives within a durable medical sales organization were sampled, as well as sales representatives from multiple sales organizations across the United States. All sales representatives possessed 12 months tenure within the participating organization and were administered the demographic survey and online EQ-i test. Refusal to participate was diminished through preliminary discussions with the organization's director of human resources by outlining the personal and organizational benefits of their involvement in the study. The organization and individual sales representatives volunteered to participate, which means more reliable results can be counted on because of the voluntary cooperation in the study.

This researcher also found validation in the importance of using sales representatives and finding their baseline scores, so future improvement in emotional intelligence skills can be made. Sojka and Deeter-Schmelz (2002) argue, "[e]nhancing a salesperson's emotional intelligence can be viewed as a three-step process: 1) assess the salesperson's current level of EI; 2) improve the salesperson's EI via suggested exercise's; 3) evaluate sales performance for feedback purposes" (p. 47). Establishing a baseline score will help the participant understand his or her strengths and areas of development.

In addition this researcher found documentation to use sales numbers from the previous year. In the article by Verbeke et al. (2008), the authors measured sales performance using the net sales volumes of the participating salespeople in the year preceding this study. In one study, the authors subtracted the person's sales target from

his or her total sales volume to correct for prize and regional influences. They used the objective data as recorded by the company. To test the hypotheses, the authors carried out hierarchical linear aggression analysis with sales performance as the dependent variable.

Sample Size

The population for this study was 38 sales representatives with 12 months tenure in a durable equipment medical sales organization located in the Midwest, as well as 98 sales representatives that work for a variety of different pharmaceutical and medical device organizations. In order to produce statistically valid results through the utilization of multi-variate analytical techniques such as *t* tests and ANOVA, a large sample population is required.

Instrumentation

Over the past 20 years, a multitude of emotional intelligence measures have been developed, but there is not one measure that is viewed more favorably than the others (Salovey & Mayer, 1990; Stein & Staff, 2005; Weisinger, 1998). Some of the more prominent measures include the Multi-factor Emotional Intelligence Scale (Salovey & Mayer), the Bar-On Emotional Quotient Inventory (Bar-On, 2004), Emotional Intelligence Quotient (Dulewicz & Higgs, 1999), Mayer, Salovey, Caruso Emotional Intelligence Test (Mayer, Salovey & Caruso, 1999), and the Benchmark of Organizational Emotional Intelligence (Stein & Staff, 2005). It is important to note that based on extensive research, these measurements are constantly being updated, revised,

and tested to improve reliability and validity (Law, Wong, & Song, 2004; Van Roony, Viswesvaran, & Pluta, 2005).

Despite which emotional intelligence measure is selected, one of the most important criteria in measuring and assessing emotional intelligence is establishing a baseline assessment score. This allows leaders to understand what their current emotional intelligence and leadership skills are, and what exercises are necessary to further develop their areas of improvement. A baseline score is essential for implementing follow-up action plans to enhance development in emotional intelligence skills.

Emotional intelligence researchers have relied heavily on the use of quantitative, positivist research methods such as surveys to measure this multidimensional construct. Several different test instruments have been developed to measure EI concepts over the past 20 years including:

a) MEIS – Multi-factor Emotional Intelligence Scale (Salovey & Mayer, 1990)
b) Emotional Competence Inventory (ECI) 360 (Goleman, 1995)
c) Bar-On – EQ-i Emotional Quotient Inventory (Bar-On, 2004)
d) EI scale (Schutte, Malouff, Hall, Haggerty, Cooper, Golden & Dornheim, 1998)
e) Emotional Intelligence Quotient – EIQ (Dulewicz & Higgs, 1999)
f) Mayer, Salovey, Caruso Emotional Intelligence test - MSCEIT (Mayer, Salovey & Caruso 1999)
g) Benchmark of Organizational Emotional Intelligence (BOEI), (Stein & Staff, 2005).

After careful consideration and evaluation of the test instruments, for the purposes of this research, the online version of the EQ-i was selected. Permission to use the EQ-i was

obtained from the authors of Multi-Health Systems, Inc. The EQ-i also had to be purchased before the researcher could obtain a copy. The EQ-i is a 125-item instrument administered either by paper and pencil or online, designed to measure the level of emotional intelligence by a five-point frequency scale. It was developed to assess 15 conceptual components of EI, which are grouped into five subscale categories (Bar-On, 2004). According to Bar-On and Morehouse (2007), the subscale categories are:

1. Intrapersonal, including the competencies of self-regard, emotional self-awareness, assertiveness, independence, and self actualization.
2. Interpersonal, including empathy, social responsibility, and interpersonal relationship.
3. Adaptability, including reality testing, flexibility, and problem solving.
4. Stress management, including stress tolerance and impulse control.
5. General mood, which includes happiness and optimism.

The Bar-On EQ-I is the most widely used measure of emotional-social intelligence to date, and the instrument has a reported internal reliability and retest reliability greater than 0.75 (Bar-On, 2004).

Proposed Pilot Study

Prior to conducting this proposed research study, a pilot study was conducted with 10 randomly selected medical sales representatives. This allowed the researcher to understand the protocol and revealed any questions participants may encounter. It also allowed the study to move forward so adjustments were made for the convenience of the participants in the research study. This helped reflect the reliability and validity of the

proposed study. For example, for the research study an exact completion date was included in the email to participants to ensure their responses would be included.

Data Collection

Primary survey research was conducted with the EI instrument called the Bar-On EQ-i. The EQ-i was administered online and the results can be tallied electronically through Multi-Health Systems website. Participants with 12 months of tenure with the participating medical sales organizations were invited to participate via an email message. The email contained information such as a brief overview of the purpose of the study, research benefits, and an explanation of confidentiality. Once the participant agreed to participate, the vice president of human resources administered the link of the online assessment, as well as the demographic survey through the participants' company email. The demographic survey consisted of questions regarding the participant's gender and tenure with the organization (See Appendix A).

The sample included voluntary participation of those sales representatives that have 12 months of sales tenure with their current organization. Participants had a window of one week to respond to the survey as HR indicated the majority of participants would take the survey within the first two days and the final last two days. The survey was identified by anonymously coding the scores with the employee's identification number and comparing it to the sales data from HR. The goal was to track their sales performance to see if those with high emotional intelligence scores performed better by tracking their actual sales performance, as it is the truest measure of actual sales success. An analysis of the sales goals achieved over the previous six months was conducted.

Two research questions were examined.

Research Question 1: Is there a relationship between EI and sales performance as measured by the EQ-i in the medical sales sector?

Research Question 2: Does the relationship between emotional intelligence scores and sales performance vary based on the individual's gender or tenure within his or her organizational?

Data Analysis

There are a number of statistical packages designed to carry out quantitative data analysis, the most widely used package is SPSS. SPSS enables the researcher to input raw data, modify, or reorganize the data once inputted and then perform a wide selection of analytical techniques (Norusis, 2007). The scales utilized within the test instruments were designed to denote the use of detailed statistical algorithms on collected data.

Descriptive statistics were used to analyze data from the demographic groups. In testing for significant difference between male and female participants and overall and subscale EI scores, two-tailed tests of independent means were conducted. A total of six *t*-tests were conducted, one for the overall score and five EI subscale scores.

Validity and Reliability

A research study must have internal validity, or it lacks credibility. According to Cooper and Schindler (2008) there are many threats to internal validity, but history, maturation, testing, instrumentation, selection, statistical regression, and experimental mortability are the most common. Since the EI instrument chosen is a reputable and proven instrument, validity and reliability are not an issue. According to Multi-Health

Systems, Inc., the EQ-i has been used for over 20 years in research. In addition, the instrument has incorporated correction factors to account for over-inflated answers (Bar-On, 2004).

This study typifies a quantitative, positivist approach as it utilizes a demographic questionnaire and survey (Cooper & Schindler, 2008). In addition, with the focus on multiple medical sales companies, the goals are aligned with quantitative research, which is utilized to, "[b]etter understand phenomena in a specific group being studied, and to make inferences about broader groups beyond those being studied" (Swanson & Holton, 2005, p. 30).

Assumptions and Limitations

With every research study, it is important to note study limitations. One limitation is the geographic location in the Midwest, since selling styles and other variables vary from one region to another. However, this could be helpful for other researchers to conduct research in other parts of the country. To help with this limitation, 98 additional sales representatives were recruited from multiple pharmaceutical and medical device organizations to ensure representation across the United States.

Limitations of the quantitative approach include the lack of exploratory investigations such as individual depth interviews, expert interviews, focus groups, and document analysis, and proxemics and kinesics (Cooper & Schindler, 2008). It is important to remain open-minded and avoid bias-preferences to produce reliable and valid research.

It was also important to note the "Hawthorne effect" as many participants could have responded more favorably because attention is being paid to them. Thus, the study was thought to be less biased since the survey of demographic data and the assessment were completed online.

Several different test instruments have been designed in order to measure the construct of EI over a relative short period of time. Although these models and measurements have received a great deal of interest they are still considered to be evolving (Dulewicz & Higgs, 1999). As a consequence, there is still much debate amongst researchers as to how EI can be most effectively measured. From reading the established literature on emotional intelligence, it can be inferred that many of the studies have been performed as educational-based research (such as requirements for a psychology course) rather than in an organizational context (Ashkansasy & Dasborough, 2003; Newsome, Day, & Catano, 2000).

Despite the tremendous amount of research and instruments that have evolved, critics of emotional intelligence may argue that there are resonating limitations to measuring and assessing EI in an organizational setting. Dating back to 1920, defining and measuring intelligence has always been a problem. According to Thorndike (1920):

> Men talk freely about intelligence and rank their acquaintances as having very little, little, much, or very much of it. If, however, they try to state just what it is, and how it is to be measured, there is difficulty. (p. 227)

The following discussion will evaluate the limitations that are echoed in both the seminal and more current literature. The first limitation is that measuring emotional intelligence can be difficult as there are multiple definitions of the construct (Caruso,

Mayer, & Salovey, 2002; McEnrue & Grover, 2006). The second criticism revolves around self-reporting biases in the field of emotional intelligence. According to Akerjordet and Severinsson (2007), self-report devices can create self-fulfilling prophecies, which can limit the analysis of the results. It would be beneficial to incorporate different approaches such as surveys administered to the participants' managers and 360-degree feedback from co-workers. This would eliminate an inflated self-evaluation and allow for more balanced and constructive criticism for the participant. Sample size also seems to be a recurring problem in both the seminal and current literature reviewed. Subjects need to be from several sales industries and ideally located geographically across the United States, not just in one concentrated area (Morehouse, 2007).

There also needs to be more research on how individuals can develop emotional intelligence (Mayer et al., 2001). For instance, if a sales representative lacked awareness of others' emotions, how would this person further develop this aspect of emotional intelligence? The seminal and current literature syntheses reveal limitations can be resolved through additional research. Akerjordet and Severinsson (2007) posit that more research needs to be conducted in organizational contexts and how emotional intelligence is a developable trait. Further research on competency scales and a more diverse population needs to be studied to establish reliability and validity (Mayer & Salovey, 1999).

Ethical Considerations

It is acknowledged that commencement of this research was reliant upon ethical clearance from Capella University, as determined by the Human Ethics Research Review Panel as it pertains to human subjects. The researcher successfully completed the CITI modules applicable to this study. The researcher has adhered to the ethical researching practices of the Belmont Report by ensuring preclusion of plagiarism and research fraud. According to the Belmont Report, ethical research is defined through three criteria: respect for others, benevolence, and justice (Ethics, 1997). Respect for others was attained through the informed consent process through which the researcher provided participants with information about the research project in a clear and concise manner, allowing ample time for participants to choose whether they wanted to participate. The human resources director signed a consent form for the organization and its employees to participate. Benevolence was applied through the analysis of the risks and benefits to the participants to ensure anticipated risks were minimal. Justice applied to the selection of participants. Researchers must avoid selecting participants solely on the basis of accessibility and influence (Ethics, 1997).

Initial participant contact was made through an electronic letter of introduction clearly stating that participation was completely voluntary and that all of the answers would be kept confidential. To minimize participants' perceived risk, their anonymity was maintained throughout the entire process. To ensure the confidentiality, privacy, and anonymity of data, only the researcher and Dr. Jim Mirabella had access to the data. In addition, the researcher signed a confidentiality agreement to protect participants. Data from the study has been saved on the researcher's personal computer, and paper data has

been stored in a secure file at the researcher's primary residence for seven years. After seven years, all data will be responsibly disposed to maintain anonymity.

CHAPTER 4. RESULTS

Collected Data

This chapter reports the data analysis and results of the study. The purpose of this study was to determine the relationship of emotional intelligence and sales performance in representatives in medical sales organizations. This quantitative, correlational study used an online survey to assess whether gender and tenure are variables in emotional intelligence scores. This information is important for researchers, human resource managers, and sales managers, as it could change the way they view the sales and recruiting process, along with leadership development programs.

The conceptual model for data analysis was based off of Morehouse's (2007) article. The results of the online EQ-i were imported into a student database by Multi-Health Systems (MHS). The dataset was then imported into SPSS for quantitative analysis. The data analysis for the EQ-I was conducted in accordance with the scoring and interpretation rules as set forth by MHS. .

In this research study, a minimum significance level of .05 was used for all tests. This means that the differences will be statistically significant if the results would have occurred by chance less than 5 times out of 100. It is reported as $p < .05$. When the statistical difference is strong, the p value will be reported as $p < .01$, which means that

the results would have occurred by chance less than 1 time in 100. If there is no significant difference, the actual *p* value will be reported.

Subjects and Procedures

Subjects were invited to participate in the study via an email message which gave a brief overview of the purpose of the study, outlined confidentiality information, and also contained the short demographic survey and instructions for the online EQ-i assessment (Morehouse, 2007). An email was sent to 350 potential participants. Of the 350 potential participants, 147 responded, representing a 47% response rate. Out of the 147 responses, 11 were disregarded due to incomplete answers on the demographic survey, or lack of completion of the online EQ-i assessment. A total of 136 participants were involved in this study. Thirty-eight sales representatives from a durable medical sales company in the Midwest, as well as 98 sales representatives from multiple pharmaceutical and medical device companies across the United States. There were 72 female participants and 64 male participants. The age of the participants ranged from 24-59 years. To participate in the study, all sales representatives had to have at least 12 months tenure with their current organization. Participants' tenure ranged from 12 months to 60 months or more.

Instruments and Collected Data

Data was gathered by two surveys. The first tool was a short demographic study that sought responses regarding age, gender, tenure, and current sales performance based upon self-reported rank. The second instrument was an online self-assessment the Bar-

On Emotional Quotient Inventory (EQ-i), published by Multi-Health Systems, Inc. (Bar-On, 2004). The online version of the EQ-I has 125 questions. The EQ-is designed to measure the level of emotional intelligence by a five-point frequency scale. It was developed to assess 15 conceptual components of EI, which are grouped into five subscale categories (Bar-On, 2004). According to Bar-On and Morehouse (2007), the subscale categories are

1. Intrapersonal, including the competencies of self-regard, emotional self-awareness, assertiveness, independence, and self actualization.
2. Interpersonal, including empathy, social responsibility, and interpersonal relationship.
3. Adaptability, including reality testing, flexibility, and problem solving.
4. Stress management, including stress tolerance and impulse control.
5. General mood, which includes happiness and optimism.

All of these categories are thought to be important in the success of medical sales representative.

The Bar-On EQ-I is the most widely used measure of emotional-social intelligence to date, and the instrument has a reported internal reliability and retest reliability greater than 0.75 (Bar-On, 2004). The EQ-i also has an inconsistency index, which tabulates the consistency of responses from the participants' assessments. For this study, the inconsistency index ranged from 0-16.7%. The rationale for the range could be a result of participants misreading the questions or rushing through the assessment.

Statistical Results

The following two research questions were examined in this study.

Research Question 1: Is there a relationship between EI and sales performance as measured by the EQ-i in the medical sales sector?

Research Question 2: Does the relationship between emotional intelligence scores and sales performance vary based on the individual's gender and tenure within his or her organization.

The following hypotheses were examined:

Test of Hypothesis H1Ao

Hypothesis H1Ao states that there is no relationship between one's sales performance and EI intrapersonal score. With a *p* value of .768, which is greater than .05, the null hypothesis is not rejected. Therefore, there is insufficient evidence to conclude that there is a relationship between one's sales performance and EI intrapersonal score. Table 1 summarizes the results.

Table 1

Sales Performance and EI Intrapersonal Scores

ANOVA

Intrapersonal

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	296.996	4	74.249	.456	.768
Within Groups	21317.475	131	162.729		
Total	21614.471	135			

Test of Hypothesis H1Bo

Hypothesis H1Bo states that there is no relationship between one's sales performance and EI interpersonal score. Refer to Table 2 for the summary of statistical results. Since the *p* value was .481, which is greater than .05, the null hypothesis is not rejected. Therefore, there is insufficient evidence to conclude that there is a relationship between one's sales performance and EI interpersonal score.

Table 2

Sales Performance and EI Interpersonal Scores

ANOVA

Interpersonal

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	460.125	4	115.031	.874	.481
Within Groups	17237.993	131	131.588		
Total	17698.118	135			

Test of Hypothesis H1Co

Hypothesis H1Co states that there is no relationship between one's sales performance and EI stress management score. The data was divided into two groups, male versus female. With a *p* value of .819, which is greater than .05, the null hypothesis is not rejected. Table 3 summarizes the results. Therefore, there is insufficient evidence to conclude that there is a relationship between one's sales performance and EI stress management score.

Table 3

Sales Performance and EI Stress Management Scores

ANOVA

StressMgt

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	312.099	4	78.025	.385	.819
Within Groups	26558.012	131	202.733		
Total	26870.110	135			

Test of Hypothesis H1Do

Hypothesis H1Do states that there is no relationship between one's sales performance and EI adaptability score. Refer to Table 4 for the summary of statistical results. Since the *p* value was .618, which is greater than .05, the null hypothesis is not rejected. Therefore, there is insufficient evidence to conclude that there is a relationship between one's sales performance and EI adaptability score.

Table 4

Sales Performance and EI Adaptability Scores

ANOVA

Adaptability

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	450.190	4	112.548	.664	.618
Within Groups	22207.545	131	169.523		
Total	22657.735	135			

Test of Hypothesis H1Eo

Hypothesis H1Eo states that there is no relationship between one's sales performance and EI general mood score. Refer to Table 5 for the summary of statistical results. Since the *p* value was .473, which is greater than .05, the null hypothesis is not rejected. Therefore there is insufficient evidence to conclude that there is a relationship between one's sales performance and general mood score.

Table 5

Sales Performance and EI General Mood Scores

ANOVA

GeneralMood

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	408.140	4	102.035	.888	.473
Within Groups	15050.500	131	114.889		
Total	15458.640	135			

*Test of Hypothesis H2A*o

Hypothesis H2Ao states that there is no relationship between one's sales performance and EI intrapersonal score for males. The data was divided into two groups, male versus female. With a *p* value of .355, which is greater than .05, the null hypothesis is not rejected. As a result, there is insufficient evidence to conclude that there is a relationship between performance and EI intrapersonal score for males. Table 6 summarizes the results.

Table 6

Sales Performance and Intrapersonal Scores for Males

ANOVA

Intrapersonal

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	631.926	4	157.982	1.122	.355
Within Groups	8309.558	59	140.840		
Total	8941.484	63			

Test of Hypothesis H2Bo

Hypothesis *H2Bo* states that there is no relationship between one's sales performance and EI interpersonal score for females. The data was divided into two groups, male versus female. With a *p* value of .557, which is greater than .05, the null hypothesis is not rejected. Therefore, there is insufficient evidence to conclude that there is a relationship between performance and EI intrapersonal score for females. Table 7 summarizes the results.

Table 7

Sales Performance and Intrapersonal Score for Females

ANOVA

Intrapersonal

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	392.090	4	98.022	.757	.557
Within Groups	7638.848	59	129.472		
Total	8030.938	63			

Test of Hypothesis H2Co

The hypothesis for H2Co states that there is no relationship between one's sales performance and EI interpersonal score for males. The data was divided into two groups, male versus female. With a *p* value of .557, which is greater than .05, the null hypothesis is not rejected. As a result, there is insufficient evidence to conclude there is a relationship between one's sales performance and EI interpersonal score for males. Table 8 summarizes the results.

Table 8

Sales Performance and Interpersonal Score for Males

ANOVA

Interpersonal

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	392.090	4	98.022	.757	.557
Within Groups	7638.848	59	129.472		
Total	8030.938	63			

Test of Hypothesis H2Do

Hypothesis H2Do states that there is no relationship between one's sales performance and EI interpersonal score for females. The data was divided into two groups, male versus female. With a *p* value of .872, which is greater than .05, the null hypothesis is not rejected. As a result, there is insufficient evidence to conclude that there is a relationship between one's sales performance and EI interpersonal score for females. Table 9 summarizes the results.

Table 9

Sales Performance and Interpersonal Score for Females

ANOVA

Interpersonal

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	173.872	4	43.468	.307	.872
Within Groups	9479.628	67	141.487		
Total	9653.500	71			

Test of Hypothesis H2Eo

Hypothesis H2Eo states that there is no relationship between one's sales performance and EI stress management score for males. Refer to Table 10 for the summary of statistical results. Since the *p* value was .718, which is greater than .05, the null hypothesis is not rejected. Therefore, there is insufficient evidence to conclude that there is a relationship between one's sales performance and EI stress management score for males.

Table 10

Sales Performance and Stress Management for Males

ANOVA

StressMgt

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	532.650	4	133.162	.524	.718
Within Groups	14983.585	59	253.959		
Total	15516.234	63			

Test of Hypothesis H2Fo

Hypothesis H2Fo states that there is no relationship between one's sales performance and EI stress management score for females. Refer to Table 11 for the summary of statistical results. Since the *p* value was .950, which is greater than .05, the null hypothesis is not rejected. Therefore there is insufficient evidence to conclude that there is a relationship between one's sales performance and EI stress management score for females.

Table 11

Sales Performance and Stress Management Score for Females

ANOVA

StressMgt

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	112.180	4	28.045	.177	.950
Within Groups	10645.098	67	158.882		
Total	10757.278	71			

Test of Hypothesis H2Go

Hypothesis H2Go states that there is no relationship between one's sales performance and EI adaptability score for males. Refer to Table 12 for the summary of statistical results. Since the *p* value was .361, which is greater than .05, the null hypothesis is not rejected. Therefore, there is insufficient evidence to conclude that there is a relationship between one's sales performance and EI adaptability score for males.

Table 12

Sales Performance and EI Adaptability Score for Males

ANOVA

Adaptability

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	822.677	4	205.669	1.109	.361
Within Groups	10942.058	59	185.459		
Total	11764.734	63			

Test of Hypothesis H2Ho

Hypothesis H2Ho states that there is no relationship between one's sales performance and EI adaptability score for females. Refer to Table 13 for the summary of statistical results. Since the *p* value was .840, which is greater than .05, the null hypothesis is not rejected. Therefore, there is insufficient evidence to conclude that there is a relationship between one's sales performance and EI adaptability score for females.

Table 13

Sales Performance and EI Adaptability for Females

ANOVA

Adaptability

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	214.935	4	53.734	.355	.840
Within Groups	10146.718	67	151.444		
Total	10361.653	71			

Test of Hypothesis H2Io

Hypothesis H2Io states that there is no relationship between one's sales performance and EI general mood score for males. With a *p* value of .666, which is greater than .05, the null hypothesis is not rejected. As a result, there is insufficient evidence to conclude that there is a relationship between one's sales performance and EI general mood score for males. Table 14 summarizes the results.

Table 14

Sales Performance and EI General Mood Score for Males

ANOVA

GeneralMood

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	258.656	4	64.664	.597	.666
Within Groups	6391.328	59	108.328		
Total	6649.984	63			

Test of Hypothesis H2Jo

Hypothesis H2Jo states that there is no relationship between one's sales performance and EI general mood score for females. Refer to Table 15 for the summary of statistical results. Since the *p* value was .291, which is greater than .05, the null hypothesis is not rejected. Therefore there is insufficient evidence to conclude that there is a relationship between one's sales performance and EI general mood score for females.

Table 15

Relationship between Sales Performance and EI General Mood for Females

ANOVA

GeneralMood

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	614.236	4	153.559	1.268	.291
Within Groups	8113.709	67	121.100		
Total	8727.944	71			

Test of Hypothesis H2Ko

Hypothesis H2Ko states that there is no relationship between one's sales performance and EI intrapersonal score for newer employees. Refer to Table 16 for the summary of statistical results. Since the *p* value was .670, which is greater than .05, the null hypothesis is not rejected. Therefore, there is insufficient evidence to conclude that there is a relationship between one's sales performance and EI intrapersonal score for newer employees.

Table 16

Sales Performance and EI Intrapersonal Score for Newer Employees

ANOVA

Intrapersonal

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	509.449	4	127.362	.593	.670
Within Groups	9665.671	45	214.793		
Total	10175.120	49			

Test of Hypothesis H2Lo

Hypothesis H2Lo states that there is no relationship between one's sales performance and EI intrapersonal score for veteran employees. With a *p* value of .798, which is greater than .05, the null hypothesis is not rejected. As a result, there is insufficient evidence to conclude that there is a relationship between one's sales performance and EI intrapersonal score for veteran employees. Table 17 summarizes the results.

Table 17

Sales Performance and EI Intrapersonal Score for Veteran Employees

ANOVA

Intrapersonal

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	227.657	4	56.914	.414	.798
Within Groups	11128.668	81	137.391		
Total	11356.326	85			

Test of Hypothesis H2Mo

Hypothesis H2Mo states there is no relationship between one's sales performance and EI interpersonal score for newer employees. Refer to Table 18 for the summary of statistical results. Since the *p* value was .785, which is greater than .05, the null hypothesis is not rejected. Therefore, there is insufficient evidence to conclude that there is a relationship between one's sales performance and EI interpersonal score for newer employees.

Table 18

Sales Performance and EI Interpersonal Score for Newer Employees

ANOVA

Interpersonal

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	274.904	4	68.726	.432	.785
Within Groups	7155.176	45	159.004		
Total	7430.080	49			

Test of Hypothesis H2No

Hypothesis H2No states that there is no relationship between one's sales performance and EI interpersonal score for veteran employees. With a *p* value of .456, which is greater than .05, the null hypothesis is not rejected. As a result, there is insufficient evidence to conclude that there is a relationship between one's sales performance and EI interpersonal score for veteran employees. Table 19 summarizes the results.

Table 19

Sales Performance and EI Interpersonal Score for Veteran Employees

ANOVA

Interpersonal

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	446.117	4	111.529	.921	.456
Within Groups	9809.418	81	121.104		
Total	10255.535	85			

Test of Hypothesis H2Oo

Hypothesis H2Oo states that there is no relationship between one's sales performance and EI stress management score for newer employees. Refer to Table 20 for the summary of statistical results. Since the p value was .954, which is greater than .05, the null hypothesis is not rejected. Therefore there is insufficient evidence to conclude that there is a relationship between one's sales performance and EI stress management score for newer employees.

Table 20

Sales Performance and EI Stress Management Score for Newer Employees

ANOVA

StressMgt

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	141.637	4	35.409	.167	.954
Within Groups	9554.363	45	212.319		
Total	9696.000	49			

Test of Hypothesis H2Po

Hypothesis H2Po states that there is no relationship between one's sales performance and EI stress management score for veteran employees. Refer to Table 21 for the summary of statistical results. Since the *p* value was .694, which is greater than .05, the null hypothesis is not rejected. Therefore, there is insufficient evidence to conclude that there is a relationship between one's sales performance and EI stress management score for veteran employees.

Table 21

Sales Performance and EI Stress Performance for Veteran Employees

ANOVA

StressMgt

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	458.019	4	114.505	.557	.694
Within Groups	16647.574	81	205.526		
Total	17105.593	85			

Test of Hypothesis H2Qo

Hypothesis H2Qo states that there is no relationship between one's sales performance and EI adaptability score for newer employees. Since the *p* value was .705, which is greater than .05, the null hypothesis is not rejected. Therefore, there is insufficient evidence to conclude that there is a relationship between one's sales performance and EI adaptability score for newer employees. Refer to Table 22 for the summary of statistical results.

Table 22

Sales Performance and EI Adaptability Score for Newer Employees

ANOVA

Adaptability

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	467.478	4	116.869	.543	.705
Within Groups	9691.342	45	215.363		
Total	10158.820	49			

Test of Hypothesis H2Ro

Hypothesis H2Ro states that here is no relationship between one's sales performance and EI adaptability score for veteran employees. Refer to Table 23 for the summary of statistical results. Since the *p* value was .736, which is greater than .05, the null hypothesis is not rejected. Therefore, there is insufficient evidence to conclude that there is a relationship between one's sales performance and EI adaptability score for veteran employees.

Table 23

Relationship between Sales Performance and EI Adaptability Score for Veteran Employees

ANOVA

Adaptability

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	300.549	4	75.137	.500	.736
Within Groups	12177.323	81	150.337		
Total	12477.872	85			

Test of Hypothesis H2So

Hypothesis H2So states that there is no relationship between one's sales performance and EI general mood score for newer employees. Since the *p* value was .479, which is greater than .05, the null hypothesis is not rejected. Therefore there is insufficient evidence to conclude that there is a relationship between one's sales

performance and EI adaptability score for newer employees. Refer to Table 24 for the summary of statistical results.

Table 24

Sales Performance and EI General Mood Score for Newer Employees

ANOVA

GeneralMood

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	479.412	4	119.853	.888	.479
Within Groups	6075.068	45	135.002		
Total	6554.480	49			

Test of Hypothesis H2To

Hypothesis H2To states that there is no relationship between one's sales performance and EI general mood score for veteran employees. Since the *p* value was .717, which is greater than .05, the null hypothesis is not rejected. Therefore, there is insufficient evidence to conclude that there is a relationship between one's sales performance and EI adaptability score for newer employees. Refer to Table 25 for the summary of statistical results.

Table 25

Sales Performance and EI Adaptability Score for Veteran Employees

ANOVA

GeneralMood

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	222.456	4	55.614	.526	.717
Within Groups	8571.881	81	105.826		
Total	8794.337	85			

Descriptive Statistics

Descriptive statistics can be used to analyze data from the demographic survey (Morehouse, 2007). In this study, 136 medical sales representatives participated and were 53% were female and 47% were male. Refer to Table 26.

Table 26

Gender

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	64	47.1	47.1	47.1
	Female	72	52.9	52.9	100.0
	Total	136	100.0	100.0	

In testing for significant difference between overall and subscale emotional intelligence scores, two-tailed tests of independent means were conducted. A total of six *t* tests were conducted, one each for the overall score and five EI subscale scores. For the purpose of this study, the 15 conceptual component scores, as well as the total EI scores produced by the EQ-i were individually compared among the group. These scores were linked to the participating sales representatives' demographic questionnaires via email from the participant to the researcher.

In this research study, there was representation of tenure, as it related to years of experience. In this study, the sales representative with the most tenure was 60 months and above. The sales representative with the least tenure was 12 months. There was a twelve month minimum criterion set for participation in the study. The average was 12-36 months. The breakdown of participants in each category was 19 participants had 12 months of tenure; 29 participants had 12-18 months of tenure; 29 participants had 18-36 months of tenure; 13 participants had 36-60 months of tenure; and 40 participants had 60 months and above of tenure. Refer to Table 27.

Table 27

Tenure

Tenure

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 12 months	20	14.7	14.7	14.7
	12 - 18 months	30	22.1	22.1	36.8
	18 - 36 months	30	22.1	22.1	58.8
	36 - 60 months	14	10.3	10.3	69.1
	more than 60 months	42	30.9	30.9	100.0
	Total	136	100.0	100.0	

Participants were asked to self-rank their performance based on five categories Top 10%, Top 20%, Top 30%, Top 50%, and Below 50%. The breakdown of participants in each category was 45 participants ranked themselves in the Top 10%; 29 participants ranked themselves in the Top 20%; 22 participants ranked themselves in the Top 30%; 20 participants ranked themselves in the Top 50%; and 16 ranked themselves in the Below 50% category.

Summary of Primary Results

After evaluating the results from this study, several conclusions can be drawn. The following two research questions were examined in this study:

Research Question 1: Is there a relationship between EI and sales performance as measured by the EQ-i in the medical sales sector?

Research Question 2: Does the relationship between emotional intelligence scores and sales performance vary based on the individual's gender and tenure within his or her organization.

After analyzing and evaluating the statistical data for the first research question, it is reasonable to assume that there is insufficient evidence to conclude that there is a relationship between EI and sales performance as measured by the EQ-I in the medical sales sector.

In response to the second research question, again there was insufficient evidence to conclude that there is a relationship between emotional intelligence scores and sales performance based on the individual's gender and tenure within his or her organization. Based on the study findings, there is insufficient evidence to conclude that there is a difference in gender scores. Results also indicated that there is insufficient evidence to conclude a difference of EI scores between newer employees and veteran tenure employees within his or her organization.

Credibility and Validity of Conclusions

The Bar-On EQ-I is the most widely used measure of emotional-social intelligence to date, and the instrument has a reported internal reliability and retest reliability greater than 0.75 (Bar-On, 2004).

Prior to administering the study, a pilot study was conducted with 10 medical sales representatives to make any adjustments for questions. All 10 individuals felt the directions and surveys were clear and easily understood.

It would be interesting to see if there is a correlation based on response rate and performance rank. Could it be that those representatives with a high rank in terms of performance may just have a better sense of responsibility when it comes to responding to items such as surveys, hence having a level of customer service making them more successful in the eyes of their customers?

There is no evidence to suggest that there is any significance in using an emotional intelligence test as a screening tool. EI is a subject that may be premature in determining the relationship between emotional intelligence and sales performance. Based on this study's findings, it may not be beneficial to use the EQ-i in recruiting medical sales representatives.

CHAPTER 5. DISCUSSION, IMPLICATIONS, RECOMMENDATIONS

Summary and Discussion of Results

The purpose of this study was to examine whether there was a significant relationship between EI as measured by the EQ-I and sales performance in medical sales representatives. The problem and the gap in the research and literature arises from the fact that emotional intelligence and sales performance in a durable medical sales organization has not been identified.

Demographic variables in this study were the total EQ, the five composite scales, and the 15 content subscales as measured by the EQ-i. The variables were tenure and gender. These variables were compared to self-reported performance rank achieved the prior year.

Findings

This study tested a model of emotional intelligence and a measure of sales performance. Overall, the results from this study showed insufficient evidence to support that there is a relationship between emotional intelligence and sales performance. Moreover, the findings showed that the emotional intelligence of high performing sales professionals was not significantly different from the emotional intelligence of low performing sales professionals. The outcomes from analyzing the demographics

variables also showed no statistical significance. For example, EI scores did not differ for newer employees versus those veteran employees.

Participation Results

There were 64 males and 72 females participated in this research study. Based on the descriptive statistics and statistical findings, there was insufficient evidence to conclude any gender or tenure differences. This was an interesting outcome because previous EI literature has indicated that women tend to score higher on the EI tests than their male counterparts (Ciarrochi et al., 2000; Mayer & Caruso, 1999; Trobst et al., 1994). In addition, previous studies have indicated that tenure has a positive impact on sales performance, but the findings of this study indicated no significant difference (Fu, 2009; Ali & Davies, 2003; Quinones, Ford, & Teachout, 1995).

Research Question Number 1

In addressing the first research question, "Is there a relationship between EI and sales performance as measured by the EQ-i in the medical sales sector?"

The results indicate that there is insufficient evidence to conclude that there is a relationship between emotional intelligence and sales performance.

Research Question Number 2

In addressing the second research question, "Does the relationship between emotional intelligence scores and sales performance vary based on the individual's gender or tenure within his or her organization?"

The results indicate that there is insufficient evidence to conclude that there is a relationship between emotional intelligence scores and sales performance based on both the individual's gender and tenure within his or her organization.

Conclusions

This study examined a gap in the literature that has not been addressed. As a result, the focus of this study was on establishing a link between emotional intelligence and sales performance. The results of the *t* tests and ANOVA concluded that there is insufficient evidence to determine whether there is a relationship between emotional intelligence and sales performance. The results also revealed insufficient evidence to indicate that there is a difference in sales representatives when it comes to gender and tenure.

Implications for Selection, Development, and Retention

A demonstrated relationship between sales and any of the variables studied could have implications for selection, training, development, and retention. However, based upon the findings of this study, there is insufficient evidence to conclude that EI could be used as a factor in the selection and development of durable medical sales representatives. According to the literature, emotional intelligence skills can be learned and improved over time, specifically for those sales representatives who are deficient in certain areas (Deeter-Schmelz & Sojka, 2003; Goleman, 1998; Mayer, Caruso, & Salovey, 1999). However, based on the findings of this study, it may be premature to use EI as a predictor of sales success. It would also be beneficial to utilize different EI

instruments in various sales professions. Additional studies would need to be conducted with various EI instruments to conclude if sales representatives could benefit from emotional intelligence training and to determine if sales organizations could implement training seminars and incorporate procedures to help employees develop EI skills over time.

Limitations

With every research study, it is important to note study limitations and the restriction on generalizability. One limitation is the sample size. Although there were 136 participants, this is not representative of all of the medical sales representatives globally. The definition of medical sales was broadly defined for the purpose of this study, as it encompassed any organization that sells durable medical equipment, pharmaceuticals, or medical devices sales. For future research it would be beneficial to use sample groups within each subgroup of medical sales. For example, a study that examined pharmaceutical sales representatives exclusively would be helpful as the sales representatives may be more homogeneous (Morehouse, 2007).

Since the subjects' participation was voluntary, it may not have been a true statistical representation of the organization. Therefore, results may not have strong generalizability for other firms and industries. In addition, there may not be a difference in EI scores because medical sales representatives may have a predisposition of similar personality traits, such as EI.

Another limitation of this study is based on the self-reported performance rank and self-reported EI score. In future research, it would be beneficial to incorporate different approaches such as surveys administered to the participants' managers and 360-

degree feedback from co-workers (Dulewicz & Higgs, 1999). This would eliminate an inflated self-evaluation and allow for more balanced and constructive criticism for the participant.

Recommendations for Future Research

There are several opportunities for future research. Research studies could utilize both qualitative and quantitative methods, even incorporating a mixed-methods approach. One proposed study option would be an EI study in the medical sales industry comparing low and high producers. Another proposed research study that could project increased validity and reliability would be a study that examines the self-reported emotional intelligence scores versus skill-based or 360-degree feedback.

It would also be interesting to investigate a longitudinal study to explore the relationship between EQ and sales performance of medical sales representatives. In addition, a study exploring a series of experimental studies to determine which EQ competencies increase or decrease with training and how they influence performance could add insight into this topic.

Further research may substantiate this study with larger sample sizes and prove that there is a relationship between emotional intelligence and sales performance. Research could also be conducted to understand what EI skills are used in different positions in an organizational setting.

A replication of this study in other industries that focuses on sales results could be another study option. In addition, further research should be conducted using other instruments designed to assess EI and the relationship to performance.

Reflections

My interest in EI dates back to 1999 when I first read Goleman's book, *Emotional intelligence: Why it can matter more than IQ*. Through my master's and my doctoral studies, I continued to read research articles on the topic and how it related to areas of interest such as sales performance, training, and leadership.

Upon completing this dissertation, I am intrigued at how many industries utilize EI, and I also found that the company that I work for has EI courses in their career development seminars.

Although this study did not find any statistical significance between the relationship between emotional intelligence and sales performance, it has added to the literature of the relevance of EI to sales performance in the medical sales arena. I still feel this is a worthwhile topic to explore, and I look forward to researching and investigating EI in different sales organizations.

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APPENDIX A. DEMOGRAPHIC SURVEY

Please choose the best answer that is applicable to your current situation.

Age

1. 25-30 years old
2. 31-40 years old
3. 41-50 years old
4. 50 years old and above

What is your gender?

1. Female
2. Male

What is your tenure with your current organization?
1.12 months
2. 12-18 months
3. 18-36 months
4. 36-60 months
5. 60 months and above

What is your current sales performance with your organization? (Based on your most recent annual sales report, how did you rank? If you haven't received your most recent sales report, where do you believe you would rank?)
1. Top 10%
2. Top 20%
3. Top 30%
4. Top 50%
5. Below 50%