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Relationships Between Emotional Intelligence and Individual Workplace Performance

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Relationships Between Emotional Intelligence and Individual Workplace Performance

Presented in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy

Lynn University

By

Tina Bauer Goldsmith

Lynn University

2008
RELATIONSHIPS BETWEEN EMOTIONAL INTELLIGENCE AND INDIVIDUAL WORKPLACE PERFORMANCE

Bauer-Goldsmith, T., Ph.D.

Lynn University, 2008
DEDICATION

This dissertation is dedicated to my former Dissertation Committee Chairman, Dr. Emad Wajeeh. It is because of Dr. Wajeeh, I was able to forge ahead in my endeavor to complete the core courses of the PhD program. Dr. Wajeeh was my teacher, my mentor, and my friend. Our relationship was special in this realm. However, with the passing of Dr. Wajeeh, my desire to continue dwindled. Despite this, I eventually found the courage to continue in the PhD program because I knew this is what he would have wanted for me, at least as much as I had wanted it for myself. Therefore, to honor Dr. Wajeeh’s memory as one of the greatest educators I have had the pleasure to study with, I dedicate this dissertation to Dr. Emad Wajeeh.
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It is with deepest heartfelt appreciation and humility that I acknowledge several individuals who imbued me with the strength necessary to travel this arduous journey. Due to the unending support, encouragement, mentoring, and coaching of each of these incredible people I would not have had the wherewithal to make it through the PhD program.

Dissertation Committee

I would like to take the opportunity to thank my dissertation chairman Dr. Robert Riedel and my committee members Dr. Jill Levinson and Dr. Maureen Goldstein for your encouragement and support. I am most appreciative of your valuable time and respectful understanding in my personal journey, particularly after the passing of Dr. Emad Wajeeh. Your positive attitude contributed to my achievement.

Advisors

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*Personal Consultant*

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Abstract

The intelligence quotients for intellectual ability or expertise in work environments are no longer leading factors in being hired or promoted (Cherniss & Goleman, 2001; Wolff, Druskat, Koman, & Messer, 2006). More recently, what appears to matter more importantly is competence for effective people management skills (Ashkanasy & Dashborough, 2003; Diggins, 2004; Douglas, Frink, & Ferris, 2004; Silberman, 2001; Wolff et al., 2006). One research question and five hypotheses were generated for the study to gain a better understanding of the relationships and factors contributing to emotional intelligence and individual workplace performance, and to elucidate which of the two emotional intelligence models in this study has better explanatory power for individual workplace performance.
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CHAPTER I
INTRODUCTION TO THE STUDY

Introduction and Background to the Problem

How does emotional intelligence or intrapersonal and interpersonal communication skills impact workplace performance? Does this mental skill require special personality traits or specific talents or competencies to monitor and relay emotion? The tapestry of emotional intelligence is vast and appears to be highly, psychologically and socially integrated, including biopsychological factors, as well. Therefore, how are emotions regulated for recognition in one’s self and others for social effectiveness?

This notion was originally researched by Charles Darwin, during the 1860’s to examine intellect, psychology, personality traits, and emotions, with the hope of establishing psychometrics for this purpose (as cited in Gardner, 1999). Shortly thereafter, the first to establish a laboratory to research empirical data and intellectual differences was Francis Galton, who founded the field of psychometrics to measure mental factors which are still utilized today (O’Connor & Robertson, 2003). Subsequent efforts to measure these mental factors were made by French psychologist Alfred Binet, who has also been credited for constructing the initial psychometric tool for the purpose of measuring intelligence (AllPsych & Heffner Media Group, 2003; Gardner, 2003).

Additionally, Charles Spearman (1904), maintained intelligence was comprised of two factors, one factor for skill to achieve specific mental tasks and the second, a dominant, general factor (the g-factor) of intelligence predominantly pertaining to the
majority of all mental tasks and the second, a dominant, general factor (the g-factor) of intelligence pertaining to all cognitive tasks. However, L. Wilhelm Stern is credited with coining the term the “intelligence quotient,” (IQ) used in assessing IQ to further define intelligence (Columbia, Electronic Encyclopedia, 2006).

In 1920, Charles Darwin was considered the first to publish work on emotional and social intelligence (as cited in Bar-On, 2005). Years later, Gardner (1983) defined intelligence as a multi-dimensional psychological construct, whereby individuals had abilities to solve problems in various cultural environments. Gardner further refined this to encompass the mind and the brain, referred to as biopsychological factors. Additionally, Gardner (1983) maintained that societal systems were relevant to intelligence processes.

However, for well over a decade, emotional intelligence (EI) has been touted as an intrinsic factor, an elusive concept in line with intrapersonal and interpersonal values as the driving force in employee workplace performance (Ashkanasy & Dasborough, 2003; Cherniss & Goleman, 2001; Goleman, 1995; Goleman, 1998; Randolph & Johnson, 2005; Wolff, Druskat, Koman, & Messer, 2006). In 1990, Salovey and Mayer coined the term “emotional intelligence.” They suggested emotional intelligence (EI) was an interrelated construct of social intelligence (SI). Salovey and Mayer (1990) initially defined emotional intelligence as “the ability to monitor one’s own and others’ feelings and emotions, to discriminate among them and to use this information to guide one’s thinking and actions” (p. 189). Subsequently, this definition was redefined to include that EI was a subset of social intelligence possibly imbedded in personality, and further stated EI involved four distinct levels or
branches of abilities: (a) perception, (b) regulation, (c) understanding, and (d) generating feelings (Mayer & Salovey, 1997). Mayer, Salovey, and Caruso (2000) define this four-branch (level) ability model as a pure model, which is one relating primarily to mental or cognitive abilities, as opposed to viewing the EI construct as a mixed model, a model which includes social behavior and characteristics of personality. The pure model of emotional intelligence utilizes the Mayer-Salovey-Caruso-Emotional Intelligence Test (MSCEIT®), a performance test to gain measures of abilities (instead of a self-report measure which reports abilities), involving eight tasks to measure the four branch model (Brackett & Mayer, 2003; Mayer, Caruso, Salovey, & Sitarenios, 2003; MacCann, Mathews, Zeidner, & Roberts, 2003). The most recent version of this test is the MSCEIT® V2.0 (Mayer et al., 2001, 2003).

Branch one is the lowest of the four-branches or levels, referring to perception, appraisal, and expression of emotion (Mayer & Salovey, 1997). According to Mayer and Salovey (1997) perception is the ability to identify the content of emotions in one’s self and that of others; appraisal is the ability to assess the emotions of others; and, expression is the ability to decipher inaccurate from accurate expression of emotion (two visual tasks rating faces and rating landscapes).

Branch two addresses how one’s emotions facilitate or generate thinking (Mayer & Salovey, 1997). Mayer and Salovey (1997) define this as the ability to prioritize, judge, reason, and differentiate between happiness and sadness, whereby individuals consider multiple view points (two tasks in scenarios for feeling sensation and judging moods).
Branch three refers to the ability of understanding, recognizing, and analyzing emotions (Mayer & Salovey, 1997). Understanding employs emotional knowledge and the differences between various labels used to refer to emotions; understanding involves knowing the actual meanings of the different labels; and, analyzing involves the ability to recognize the transitions of emotions (Mayer & Salovey, 1997) (two tasks in choosing blends of emotions and understanding changes in vignettes).

Branch four is considered an individual’s ability to be reflective as well as have the ability to regulate emotions for personal and intellectual growth. Reflective is defined as the ability to look at emotions and monitor whether to engage or disengage from a particular emotion. This involves regulation of emotions in one’s self and in others by repressing or expressing emotions (Mayer & Salovey, 1997) (two tasks involving vignettes for actions affecting personal feelings and the consequences of feelings affecting relationships).

On the other hand, the mixed model is defined as a combination of non-cognitive abilities, personality traits, and competencies (Bar-On, 1997; Bar-On, 2005; Boyatzis, Goleman, & Rhee, 2000; Goleman, 1995, 1998). Reuven Bar-On (2005) defines this combination as emotional-social intelligence “a cross-section of interrelated emotional and social competencies, skills, and facilitators that determine how effectively we understand and express ourselves, understand others and relate with them, and cope with daily demands” (p. 3).

Bar-On (2000) developed the Emotional Quotient Inventory (EQ-i™) a scale comprised of five subscales (the intrapersonal subscale, the interpersonal subscale, the adaptability subscale, stress management subscale, and the general mood
subscale) to measure fifteen interrelated variables. The intrapersonal subscale includes the following variables defined as: (a) self-regard (SR) the “ability to respect and accept oneself as basically good;” (b) emotional self-awareness (ES) “the ability to recognize one’s feelings;” (c) assertiveness (AS) “the ability to express one’s feelings;” (d) independence (IN) “the ability to be self-directed and self-controlled in one’s thinking actions and to be free of emotional dependency;” and self-actualization (SA) “the ability to realize one’s potential capabilities (Bar-On, 2002, pp. 15-16).

The interpersonal subscale is comprised of: (a) empathy (EM) “the ability to be aware of, to understand, and to appreciate the feelings of others;” (b) social responsibility (RE) “the ability to demonstrate oneself as a cooperative, contributing, and constructive member of one’s social group;” “and (c) interpersonal relationships (IR) “the ability to establish and maintain mutually satisfying relationships that are characterized by intimacy and by giving and receiving affection” (Bar-On, 2002, p. 16).

The adaptability subscale includes: (a) reality testing (RT) “the ability to assess the correspondence between what is experienced and what objectively exists;” (b) flexibility (FL) “the ability to adjust one’s emotions, thoughts, and behavior to changing situations and conditions;” (c) problem solving (PS) “the ability to identify and define problems as well as to generate and implement potentially effective solutions” (Bar-On, 2002, p. 17).

The stress management subscale consists of two variables stress tolerance (ST) “the ability to withstand adverse events and stressful situations without ‘falling apart’
by actively and positively coping with stress” and impulse control (IC) “the ability to resist or delay an impulse, drive, or temptation to act” (Bar-On, 2002, p. 18).

The last subscale is the general mood subscale also defined by two variables, optimism (OP) “the ability to look at the brighter side of life and to maintain a positive attitude, even in the face of adversity” and happiness (HA) “the ability to feel satisfied with one’s life, to enjoy oneself and others, and to have fun” (Bar-On, 2002, p. 18).

Douglas, Frink, and Ferris (2004) maintain that emotional intelligence is a “social effectiveness construct” and a cross between learnable social skills and personality (p. 3). However, “personality and social skills are different; personality traits are rather enduring dispositions while social skills are learnable” (Douglas et al., 2004, p. 3). Yet, Funder (1997), and Carver and Scheier (2000) maintain genes and environments may be optimal determinants of personality.

The development of behavior is influenced by genes, which in turn predispose individuals to develop in particular ways (Funder, 1997). “A stressful environment may lead a genetically predisposed individual to develop mental illness, for example, while leaving individuals without that predisposition psychologically unscathed” (Funder, 1997, p. 187). Explanations of how behavioral genetics intercorrelate with brain structures and physiology, as well as how individuals’ genetically determined tendencies interact with environmental climates should address how one behaves (Funder, 1997). Therefore, temperament is considered genetic, while personality can probably be learned (Funder, 1997; Carver & Scheier, 2000).

Cherniss and Goleman (2001) claim this capacity to learn (or improve) behavior is influenced by the ability to accept change to help maximize individual
activity in the workplace. This is primarily predicated on one’s emotional intelligence (Cherniss & Goleman, 2001). Additionally, Cherniss and Goleman (2001) indicate *emotional intelligence and social intelligence* may be contributing factors in workplace performance, and further suggest that although there may be the potential for emotional and social learning, this is dependent on perspective individuals, each individual’s developmental capacity, and an individual’s social/cultural frameworks for social effectiveness to take place.

According to Bar-On (2005) *social effectiveness* is a construct of emotional intelligence. Emotional intelligence is a cross between personality traits and social skills, but posits that “personality traits are rather enduring dispositions while social skills are learnable” (Douglas et al., 2004, p. 3). However, Goleman (1998) maintains that some aspects of emotional intelligence, such as social skills for persuasion and adaptability can be developed, and possibly dependent on one’s social competencies and personality.

*Personality intelligence* involves psychological processes for behavioral patterns, thinking patterns, and emotional patterns (Mischel, 1999). *Personality traits* are qualities of individual characteristics that distinguish individuals from one another (Boeree, 2004; Mischel, 1999) and may partially be genetically based (Lopes, Salovey, & Straus, 2003).

The father of personality theory Gordon Allport believed individuals had varying, inherent dimensions of characteristics (Boeree, 2004; Funder, 1997; Mischel, 1999). These dimensions included five primary personality traits, introduced in 1949, by D. W. Fiske: extraversion, agreeableness, conscientiousness, emotionality, and
intellect, referred to as the Big Five factor model or five dimensions of personality (as cited in Carver & Scheier, 2000). Within each of these five traits exists six subset traits (Boeree, 2004; Funder, 1997; Mischel, 1999). However, while personality traits are genetic dispositions, social skills may be learnable (Douglas et al., 2004). But, the links between emotional intelligence and personality involve multiple processes, which need further assessment (Matthews, Zeidner, Roberts, 2004). Regardless, “similar to other social effectiveness constructs, emotional intelligence is a hybrid touching both domains” (Douglas et al., 2004, p. 3).

In addition, according to Albrecht (2004) social skill or social intelligence is a multidimensional construct and the ability of an individual to utilize various interpersonal skills or social skills to strategically guide interactions with others. The definition of social intelligence (SI) is an individual’s ability to understand the contexts one is in, function in a socially effective manner, and foster positive relationships (Albrecht, 2004; Douglas et al., 2004; Gardner, 1983; Goleman, 1998; Mayer & Salovey, 1997; Randolph & Johnson, 2005; Salovey & Mayer, 1990). It is considered to develop as an adaptation to social complexities (Whiten, 2000). Individuals with SI have the ability to make sense of social experiences (Kihlstrom & Cantor, 2000). This is a necessary commodity in the workplace (Cherniss & Goleman, 2001; Goleman, 1998). Accordingly, this would involve emotional competence which is defined as a learned capability based on emotional intelligence (Goleman, 1998). Goleman (1998) maintains successful workplace performance occurs due to emotional competence.
Individual workplace performance (job holder role) (Welbourne, Johnson, & Erez, 1998) is the individual level of achievement, as perceived by the individual, characterized by motivational behavior predicated on proper feedback and rewards (Cherniss & Goleman, 2001; Welbourne, Johnson, & Erez, 1998). This involves a high degree of interconnectedness or integration with psychological competencies (Bar-On, 2005; Cherniss & Goleman, 2001; Goleman, 1998; Luthans, 2002; Nikolaou & Tsaousis, 2002).

The causal variable in workplace performance is emotional intelligence encompassing the ability of an individual to adapt to his or her environment effectively (Douglas et al., 2004; Goleman, 1995; Goleman, 1998; Mayer & Salovey, 1997). The outcome variable is workplace performance (Goleman, 1995; Goleman, 1998; Mayer & Salovey, 1995; Mayer & Salovey, 1997). This has given rise to “the newest branch of psychology” EI, focusing on workplace performance (Kunnanratt, 2004, p. 489).

There are several models (Douglas et al., 2004) and theories (Ashkanasy & Dashborough, 2003) to address emotional intelligence. However, Gardner (2003) contends that since each person is unique and since no two people are alike, understanding intelligence is difficult particularly since individuals have at least seven intelligences to draw from. Multiple intelligences are integrated at various biopsychological levels for human behavior to ensue, which entails addressing individual differences (Gardner, 2003).

It is suggested that the theory of empathy may best describe emotional intelligence, first used by E. B. Titchener, in the 1920’s to discuss how empathy
comes “from a sort of physical imitation of the distress of another, which then evokes the same feelings in oneself” (as cited in Goleman, 1995, p. 98). Several empirical studies commencing with Salovey and Mayer, led to refinement of the emotional intelligence theory (Mayer and Salovey, 1997).

The topic areas of EI and workplace performance were identified because scholarly literature about emotional intelligence has been a dominant construct in exploring workplace performance, specifically since the term first coined by Salovey and Mayer, in 1990, was subsequently popularized as such by Daniel Goleman, in 1995. Despite this, in some literature, emotional intelligence has been explored as a subset of social intelligence having an impact on workplace performance (Bar-On, 2005; Cherniss, 2000; Douglas et al., 2004; Goleman, 1995; Goleman, 1998; Kumanratt, 2004).

According to Reuven Bar-On (2005) emotional intelligence mirrors both emotional and social competencies which are needed for successful workplace performance and for effective human behavior to ensue. Those individuals who portray a high degree of emotional and social functioning have positive relationships with others (Ashkanasy & Dashborough, 2003; Bar-On, Handley, & Fund, 2006).

Due to the current globalization of business organizations, a shift from traditional business practices, and the accomplishment of work related tasks, it is necessary to critically analyze an individual’s performance and how it relates to effective workplace performance. In the ever-changing landscape of global organizations, individual dynamics may have deleterious effects upon others in the work environment (Ashkanasy, 2002; Douglas et al., 2004; Kumanratt, 2004; Lubit,
2004; Luthans, 2002; Weiss & Cropanzano, 1996). Therefore, identifying emotional intelligence and awareness in the workplace may present a high degree of value for organization’s and employee workplace performance (Ashkanasy & Dashborough, 2003; Cherniss & Goleman, 2001; Rapsiarda, 2002).

Does emotional intelligence enhance effectiveness for individual workplace performance? Is it a key factor? If this is the case, then what are the relationships between emotional intelligence and individual workplace performance? Due to the widening of the theoretical frameworks and concepts of intelligence with specific regard to emotional intelligence, this has given rise to possibly undermining what emotional intelligence may be comprised of and its utility. Therefore, identifying and assessing the dimensions of emotional intelligence are prudent.

**Purpose of the Study**

The purpose of this review is to critically analyze empirical and theoretical literature about the relationships between emotional intelligence and individual employee workplace performance at a private, South Florida university, using two models to measure emotional intelligence, and existing performance review data, and to identify areas of future scholarly inquiry. The primary focus of this non-experimental, correlational (explanatory) and causal comparative (exploratory) research study is to investigate the relationships between emotional intelligence and individual workplace performance, to examine which survey instrument best explains emotional intelligence and individual workplace performance, to examine these relationships for different ages, gender, educational attainment, and job title groups, to expand upon the existing theoretical frameworks and concepts of emotional
intelligence, and to address the processes of intrapersonal and interpersonal relationships which are said to be embedded within social interactions. These intrapersonal and interpersonal relationships may increase employees' abilities to cope within the environmental demands associated with business entities for workplace performance (Ashkanasy, 2002; Ashkanasy & Dasborough, 2003; Bagshaw, 2000; Cherniss, 2000; Cherniss & Goleman, 2001; Douglas et al., 2004). Therefore, due to the nature of transformational businesses, the topic of emotional intelligence in the work environment is currently of major, global interest. Having the emotional and social wherewithal to accurately perceive and understand one's own emotional content, as well as what others are thinking or feeling may be a much needed skill, competence, or ability in managing how individuals behave with one another (Ashkanasy, 2002; Ashkanasy & Dashborough, 2003; Cherniss & Goleman, 2001; Weiss & Cropanzano, 1996). Too often people may become so involved in their own emotions, negating the perspectives of others. For this reason, how emotions are managed may have either positive or negative implications (Ashkanasy, 2002; Ashkanasy & Dashborough, 2003; Cherniss & Goleman, 2001; Weiss & Cropanzano, 1996). The significance and underpinnings of emotional intelligence and the utility for workplace performance issues may be a critical factor of the performance success in individuals, creating the necessity to research individual performance (Ashkanasy, 2002; Ashkanasy & Dashborough, 2003; Bar-On, 2005; Cherniss & Goleman, 2001; Rapisarda, 2002; Elfenbein, 2006), particularly where emotional thoughts are concerned (Ashkanasy, 2002; Ashkanasy & Dashborough, 2003; Massey, 2002).
There are two leading models that explain emotional intelligence which will be used in this study: (1) the Cognitive Four Branch Model, a pure model developed by Mayer, Salovey, and Caruso (2002); and, (2) the Bar-on Emotional-Social Intelligence Model, a mixed model developed by Bar-On (2004). However, no studies were found that compared which of these two models has greater explanatory power of individual workplace performance, and future inquiry is needed. To address this recommendation, a non-experimental, correlational (explanatory) and comparative survey research design will be used. The study includes descriptive, explanatory, and comparative purposes:

1. Descriptive statistics will be used to describe the demographic characteristics of the individuals of the organization. This will include conducting frequency distributions, measures of central tendency, and variability.

2. The explanatory purpose is to examine the relationships of emotional intelligence and individual workplace performance.

3. The comparative purposes are as follows: to compare the two tests to see if the MSCEIT© and EQ-i™ measure the same factors contributing to emotional intelligence, to see which of the two models and its associated measures better explains individual workplace performance, to compare these factors to the existing annual performance review data, and compare the groups of individuals in the research design.
Definition of Terms

Independent Variable(s)

**Emotional Intelligence: Pure Model**

*Theoretical Definition.* Emotional intelligence is "the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (Mayer & Salovey, 1990, p. 189), including a subset of social intelligence possibly imbedded in personality, involving four distinct levels or branches of abilities: (a) perceiving (appraising, and expressing emotions), (b) generating feelings (facilitating and differentiating emotions), (c) understanding (recognizing and analyzing emotions), and (d) regulating (reflecting and monitoring emotions) (Mayer & Salovey, 1997; Mayer, Salovey, & Caurso, 2000).

*Operational Definition.* Emotional intelligence will be measured using the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT©) abilities scale (Emotional Intelligence Quotient-EQI) developed by Mayer et al., to measure four cognitive areas (branches) of abilities. There are 12 performance tasks, with two tasks per branch for a total of 141 items, which is scored using a five-point rating scale and multiple choice response formats (Mayer, Salovey, Caruso, & Sitarenios, 2003) (See Appendix C, p. 164).

**Emotional Intelligence: Mixed Model**

*Theoretical Definition.* Emotional intelligence is a combination of social and emotional intelligence theories (ESI), including competencies, skills, and facilitators (Bar-On, 2005) for emotional expression and adaptability (Bar-On, 2005; Bar-On, Fund, & Handley, 2006).
Operational Definition. ESI will be measured using the EQ-i™, a self-report five-composite scale with 15 subscales to measure: (a) intrapersonal subscale (self-regard, emotional awareness, assertiveness, and independence) (b) interpersonal subscale (empathy, social responsibility, and interpersonal relationships), (c) adaptability subscale (reality testing, flexibility, and problem solving), (d) stress management subscale (stress management and tolerance control), and (e) general mood subscale (optimism and happiness) developed by Bar-On (1997). The test is comprised of 133 items which is scored using a five-point rating scale (Bar-On, 1997; Bar-On, 2002; Bar-On 2004; Bar-On, 2005) (See Appendix C, p. 164).

Dependent Variable

Individual Workplace Performance

Theoretical Definition. Individual workplace performance is defined as the job holder's role, including multidimensional expectations and role behaviors individuals have to fulfill workplace performance (Welbourne, Johnson, & Erez, 1997; Welbourne, 1998; Welbourne, Johnson, & Erez, 1998).

Operational Definition. The Performance Review Scale© was developed by Administaff in 1994, by various resource experts in the field of human resource management; and, is based on domain experts' judgments. Administaff (2006) claims the key differentiator in the application of the Performance Review Scale© is the use of rating competencies instead of rating duties and responsibilities and is measured on a five-point Likert scale, with ratings response categories individualized and tailored by the organization in this research study. However, this test will not be administered. Existing (coded) data will be obtained through ethical and confidential means. The confidential
information obtained will subsequently employ specified means for recoding (further elaborated in the section for ethical means and considerations) to create anonymity of the data for the purpose of protecting the participants in the study (See Appendix D, p. 169).

**Justification of the Study**

Emotional intelligence has been identified as a critical component which may impact workplace performance, particularly due to the recent complexity of globalization, modernization, and the changes in cultural norms (Bar-On, 2005; Cherniss & Goleman, 2001; Diggins, 2004; Dulewicz, Higgs, & Slaski, 2003; Rapisarda, 2002; Shaffer & Shaffer, 2005). No longer is IQ considered sufficient enough to address successful outcomes (Feist & Barron, 1996; Shaffer & Shaffer, 2005). Since there is growing evidence that people’s moods appear to affect and influence those around them, this possible, fundamental link suggests that processes of emotional intelligence may be at the core (Cherniss & Goleman, 2001; Diggins, 2004; Douglas, Frink, & Ferris, 2004; Totterdell, Kellent, Teuchmann, & Briner, 1998). More in-depth studies on emotional intelligence and workplace performance might help predict workplace performance, predict workplace success, help examine and monitor workplace productivity, and promote an increase in profitability (Cherniss & Goleman, 2001; Diggins, 2004; Douglas, Frink, & Ferris, 2004; Totterdell, Kellent, Teuchmann, & Briner, 1998). How we think and act socially, is amplified in current workplace environments, because many individuals spend a great deal of time in the workplace (Totterdell, Kellent, Teuchmann, & Briner, 1998), creating the need to examine and assess emotional intelligence (Ashkanasy & Dashborough, 2003; Cherniss & Goleman, 2001; Diggins, 2004; Douglas, Frink, & Ferris, 2004; Massey, 2002; Totterdell, Kellent, Teuchmann, & Briner, 1998).
Due to the lack of conclusive evidence supporting hypotheses that emotional intelligence is an actual intelligence (Matthews, Roberts, & Zeidner, 2003; Zeidner, Matthews, Roberts, 2004), a much better understanding is needed (Ashkanasy & Dashborough, 2003; Matthews et al., 2003; Zeidner et al., 2004). Since, there is a divergence amongst researchers regarding what defines emotional intelligence (what emotional intelligence is comprised of and the survey instruments being used), additional expansion in assessment and research is evident (Ashkanasy & Dashborough, 2003; Matthews et al., 2003; Zeidner et al., 2004). As a result, this research study is an attempt to fill gaps in the literature. Additionally, no other research has utilized both survey instruments for employees within the same research study to measure and assess emotional intelligence or additionally compare both surveys in the same study with individual employee workplace performance reviews (in a university setting). Therefore, this study may be a stepping stone to further enhance the field of emotional intelligence to help move the knowledge in the field forward.

The study is feasible and researchable due to the following: the concepts of the theoretical framework can be measured; the research hypotheses can be quantitatively explored and analyzed; time investment and time management is possible; the participants are accessible; and, construct validity and internal consistency reliability can be established using statistical analyses. Therefore, investigating relationships between emotional intelligence and individual workplace performance is suggested.

**Delimitations and Scope of the Study**

The delimitations and scope of the study are as follows:

1. This study will only focus on one private university in South Florida.
2. All employees are from the same university.

3. All participants must complete both survey instruments in order to compare the instruments to one another.

Organization of the Study

The study will consist of five chapters. Chapter I of the study provides the overview, comprised of background information, the purpose and justification of the study, the delimitations, and the definitions of the variables. Chapter II includes a critical analysis of theoretical and empirical literature regarding emotional intelligence and workplace performance. The in-depth review of the literature elucidates literature gaps, from which the hypotheses are derived and the hypothesized model is drawn.

Chapter III consists of the research methodology to respond to the research question, examine the hypotheses, and to test the hypothesized model which includes: the research design, the target population, sampling, instrumentation, data collection procedures, and an evaluation of the methodology. Chapter IV describes aspects of reliability and validity of the variables, as well as findings for the tested hypotheses. Chapter V presents the conclusion of the study. This chapter includes: conclusions, interpretations, and implications of the research findings, as well as an explanation of limitations of the study and suggestions for future research on the topic.
CHAPTER II
LITERATURE REVIEW, THEORETICAL FRAMEWORK, RESEARCH QUESTION, AND HYPOTHESES

Introduction

Review of the Literature

Multiple Intelligence

Gardner’s (1983) theory of *Multiple Intelligences* purported that an individual’s mind encompasses several forms of intelligence. Emotional intelligence is referred to as intrapersonal intelligence, whereas social intelligence is referred to as interpersonal intelligence; however, there are claims that both are necessary for an individual to understand one’s self and one’s interactions with other individuals (Bar-on, 2005; Gardner, 1983; Salovey & Mayer, 1990).

*Multiple intelligence* is a multidimensional construct (Gardner, 1983). Gardner’s model (1983) proposed there are seven clusters of intelligences determining peoples’ behavior:

1. linguistic intelligence
2. musical intelligence
3. logical-mathematical intelligence,
4. spatial intelligence,
5. bodily-kinaesthetic intelligence,
6. intrapersonal intelligence (cognitive factors)
7. interpersonal intelligence (social factors)
However, Gardner (1983) maintains that the combination of *emotional (intrapersonal) intelligence and social (interpersonal) intelligence* connect people through interactions with one another. Combined, *emotional and social intelligence* is an individual’s ability to regulate one’s reactions to others, by being aware of one’s emotions (*emotional intelligence*) combined with the ability to successfully interact with individuals in various situations (*social intelligence*) (Gardner, 1983).

According to Gardner (1983) *social intelligence* is an interchangeable term used to refer to interpersonal intelligence. Interpersonal intelligence or social intelligence is one of the seven intelligences individuals have, to successfully experience dealings with others, and a theory upon which “central to my notion of an intelligence is the existence of one or more basic information-processing operations or mechanisms, which can deal with specific kinds of input” (Gardner, 1983, p. 64). This theory has much social significance for the workplace; however, it is not discussed what the intervening variables are to determine how to discriminate between them or specifically how to go about measuring variables contributing to multiple intelligence.

Additionally, in 1990, Gardner re-evaluated the original MI theory of the seven intelligences to propose the possibility of three more intelligences: (a) naturalistic intelligence, (b) existential intelligence, and (c) spiritual intelligence (Gardner, 1993; Gardner, 1999). This is presently being further researched, since a premium has been placed on understanding the human mind, specifically due to the recent global changes for employee placement, as well as student placement efforts (Gardner, 2003). It is prudent not only to pool intelligence resources, but, address how to best formulate a most productive global environment for a variety of cultures, which entails appropriate
modes of measuring intelligence (Gardner, 1999; Gardner, 2003). Despite expansion of the multiple intelligence theory, which may hold relevance, it is not discussed what particular psychometrics are necessary to test and measure this extremely complex theory.

Individuals are unique with a high variance in information processing skills, abilities, and competencies; and, it is not specified what particular research measures and instruments must be utilized to measure what the direct and indirect relationships are for causality about information processing. This poses limitations for Gardner’s theory: (a) it is difficult to measure, (b) it is not known precisely how to measure, and (c) it is not known what psychometrics would be most appropriate to utilize.

Gardner’s (1999) theoretical model was not initially proposed to address individual differences, regarding strengths and weaknesses. Instead, the multiple intelligence theory was proposed as a way of looking at the psychology of the mind and the synthesis of multiple processes involved in human cognition and competencies, thereby challenging classical views of human cognition (Gardner, 1999). Historically, the discipline of psychology excluded research scientists from other disciplines, such as neurology and physiology (Gardner, 1983). Gardner’s (1983) theory was proposed to address mathematical interpretation of the psychometric measures employed for general intelligence testing, which supposedly determined the intelligence quotient (IQ) of an individual, and an individual’s future success. Although standard IQ testing may have had some predictive validity for individual scholastic success, it has been inadequate to measure other equally important
individual factors, as well as environmental contexts (Gardner, 1983; Gardner, 1999, Gardner 2001).

The multiple intelligence theory is broad in scope, addressing a set of general assumptions making the theory abstract and ambiguous for predictive validity and possible bias. Additionally, theoretical weakness is created since many variables contribute to the theoretical complexity of the theory. Furthermore, it appears the multiple intelligence theory does not provide enough information on how to measure the theory regarding the various forms of information processing involved in human behavior. The theory is too broad and fragmented to be testable in order to reveal insight and evidence for the ideas Gardner has put forth. The multiple intelligence theory only provides partial support for Gardner’s claim, lacking systematic or psychometric measuring tools. Although Gardner discusses the need for a joint effort by other disciplines to combine testing efforts to validate the theory, the paucity of evidence to do so appears to limit the theoretical support the multiple intelligence theory needs for predictive validity. However, according to Horn (1989),

... no one essence or compound theory adequately describes the relations among all the abilities that indicate human intellectual capacities; there are many mixtures of abilities that might be labeled intelligence, but to make these comparable there must be an adequate basis for sampling the domain of intellectual abilities (p. 37).

Social Intelligence

Cantor and Kilstrom (1987) view social intelligence as an accumulation of problem-solving skills, competencies, and abilities individuals harness throughout
experiences in social events. Each individual interprets social situations based on the
social interactions one has experienced over time which is individual knowledge-
based and additionally based on a cognitive point of view (Cantor & Kihlstrom, 2000).

A causal-comparative analysis was conducted by Gigergenzer and McElreath
(2003) for the purpose of examining, the rational-choice model of behavior, who
made a comparison between individuals who are able to make rational choices and
those who suffer from the mental disease autism. People with autism are unable to
decipher other people’s intentions (Gigergenzer & McElreath, 2003). The rational-
choice model of behavior, grounded in theoretical, philosophical, and empirical
literature indicates that individuals behave based on a common consensus. The causal-
comparative review was based on aspects of social intelligence elicited during
decision-making in games. Spitefulness, reputations, and fairness intentions
(intervening variables) were viewed as the other variables that emerge for individual
gain (Gigergenzer & McElreath, 2003). People who lack social intelligence
(independent variable) or as in autism, have difficulty in judging the intention of
others, will not behave consenually (dependent variable), but will base decision-
making on one’s own intentions (Gigerenzer & McElreath, 2003). By doing an
analysis of the existing literature, Gigergenzer and McElreath (2003) contended that
people did not act based on fairness, and further suggested economic theory should be
examined and given more credence, as opposed to mental diseases and cognitive
behavior for decision-making purposes.

The comparison was made between psychologists who study people’s cognitive
judgments in decision making and experimental economists who study social games.
The analysis was grounded in theoretical literature, for example Kohlberg’s theory of moral development (as cited in Gigerenzer & McElreath, 2003). Spitefulness, reputations, and fairness intentions (intervening variables) were viewed by Gigerenzer and McElreath (2003) as the other variables that emerged for individual gain.

However, based on their premises, the propositions were weak, because intervening variables can be different for different situations, as well as unique to each individual, indicating that social behavior needs to be scrutinized with better analyses and methodologies, since many constructs comprise social intelligence, as the researchers stated. Gigerenzer and McElreath (2003) propose disregarding what expected outcomes could be for decision making and starting over, based on empirical research of the capabilities of the human mind. This indicated that researchers have only relayed information pertinent for peer reviews, negating other valuable information. However, Gigerenzer and McElreath (2003) did not go into explicit discussion, indicating bias on their part. Instead they implied that starting over with better research studies using social scientists who do not omit pertinent information for probability in decision-making are needed to illustrate the intentions people have in decision-making (Gigerenzer & McElreath, 2003).

Examples are given to explain how experimenters and participants may have different theories on what payoffs are important in given experiments, which they claim will ultimately sway decision-making processes. However, the study is weak, since it does not specify how to prevent this bias, what measures should be constructed, how to interpret findings, who should be researched, and in what context. Additionally, it is indicated that people who play computer games have different
intentions during this type of social interaction versus individuals who socially interact
during games with other people, as a possible alternative to prior experimental models.

This type of research has limitations, for validity, reliability, and
generalizability, because games have fixed rules, whereas human social interactions
are not necessarily fixed (Gigerenzer & McElreath, 2003). Peoples’ decisions are
based on unique, individual and situational behaviors and cues, cultural experiences,
and occupational experiences, making socialization difficult to research and measure
(Gigerenzer & McElreath, 2003).

Research comparing decision-making in playing computer games and decision-
making between people may be a new concept, but there appears to be a major gap in
the literature; and, the review was limited in scope, since psychometric scales are
needed to objectively identify socially significant variables and the relationship(s) of
variables that constitute social intelligence and possible intervening variables for
social cognition, personality factors, varying personal experiences, and individual
knowledge bases contributing to the uniqueness between and among individuals.
Replication including more detailed studies may help clarify which intelligence
constructs are crucial in decision-making, since decisions are rather based on
situational experiences. Future studies are needed to test intervening variables to
broaden the scope.

Based on a review of seminal literature, Kihlstrom and Cantor (2000)
conducted a critical analysis maintaining social intelligence measuring tools need
better design, to incorporate social cognitive skills. Psychometric measures for social
intelligence have used self-report questionnaires, such as the Social Competence
Questionnaire which quantitatively rates subjects according to descriptions of social behavior (Kihlstrom & Cantor, 2000). Better, objective performance measurements should be incorporated into the design of measurement tools to quantify the various measures of social intelligence. Individuals have many different experiences, including individual differences in knowledge, creating variance in social behavior which broadens the scope of research (Kihlstrom & Cantor, 2000).

It may be more prudent to investigate what social intelligence individuals have, by exploring other variables, because of individualistic social cognitive constructs and individualistic knowledge bases and expertise unique to each individual. Further investigation is needed, since these elements have pertinence involving important dimensions of personality which indicates the necessity for a mixed-model approach (Kihlstrom & Cantor, 2000).

Nonetheless, Bar-on (2005) has created a measurement to address both emotional and social factors, terms Bar-On recently shortened which he refers to as the emotional-social intelligence issue; however, it is a self-report measure, and excludes more objective measures that might possibly indicate a higher significant impact on interpersonal intelligence. This implies that limitations in the design of specific research tools have not addressed the multitude of possible variables more objectively for optimal results, (which may indeed be spurious) leading to possible biases, as well as major gaps in the literature.

Further research and psychometric measures are needed, to objectively identify emotionally and socially significant variables and the relationship(s) of variables that constitute social intelligence and social intelligence variables, in tandem with
emotional intelligence and emotional intelligence variables, as well as social
cognition, personality factors, varying personal experiences, and knowledge bases
creating uniqueness between and among individuals. However, this study did show a
high degree of strength by indicating how it is important to be more aware of multiple
variables, as well as varying relationships between and among variables involved in
social intelligence, because of the multitude of unique individual differences and
personalities which may need to be examined in future research.

**Personality Intelligence**

*Personality* intelligence is comprised of both internal and external components
(Bar-On, 2005; Douglas et al., 2004; Goleman, 1998; Mayer, 1998). The internal
component informs people how individuals think of others; whereas the external
component of personality informs individuals of how people think of one another
(Matthews, Zeidner, & Roberts, 2004; Carver & Scheier, 2000; Zeidner, et al., 2004).

In 1921, the father of personality theory, Gordon Allport introduced the seminal
research on *personality trait theory*, maintaining individuals are uniquely comprised of
various personality traits (Allport & Allport, 1921; Allport, 1960). Because
individuals are so unique from one another, it has been difficult to measure, despite
the advancements in measuring scales to discriminate what variables contribute
causality for certain behaviors (Allport & Allport, 1921; Allport, 1960).

*Personality trait theory* is broadly discussed implying that basic personality
traits are individual inherent traits. In 1920, Allport conducted a correlational study at
the Harvard Psychology Laboratory to test the broadly categorized personality traits:
intelligence, temperament (emotional breadth and emotional strength), self-expression
(extroversion-introversion, ascendance-submission, expansion-reclusion, compensation, and insight/self-evaluation), and sociality (social participation, self-seeking and aggressive-seeking, and susceptibility to social stimuli) (Allport & Allport, 1921). The information on the major constructs and the interplay of personality tendencies was nebulous and did not indicate enough information to elucidate how these traits were determined.

Gordon Allport, conducted this correlational study on a sample of 55 men in all grade levels, but particularly in the sophomore and junior levels, to test Allport’s four main categories of traits (Allport & Allport, 1921). However, it was not discussed how the sample was obtained, posing limitations for the study, such as possible selection bias, validity and reliability of selection, including future replication.

Dearborn’s Group Intelligence Test of Intelligence, General Exam No. 5 was administered to measure intelligence; however, a correlational significance of personality traits was not found in Allport’s study (Allport & Allport, 1921). The Pressey Affective Spread Test was used to measure temperament, but had little value, because no significant correlations were obtained by Allport, creating another limitation.

Self-expression was tested using various instruments which were not described, but it was implied that questionnaires and letters were used, asking participants to write letters answering an advertisement for employment (Allport & Allport, 1921). Self-expression may yield bias and hamper replication, causing further limitations for the purpose of this study. Absence of expression and how individuals expanded on qualifications for the position were supposed to be indicative of how
individuals were rated along with self-evaluations, but since reliability and validity of the instruments were not given in the design of the study, this again created limitations for replicating the study.

Questionnaire reports were used to measure the broad category of sociality (Allport & Allport, 1921). Ratings were not indicated but rather summarized, using subjective evaluations, which may have been biased. Furthermore, "too little attention is paid to the uniqueness and contemporaneity of personal motives" (Allport, 1960, p. 26). It appeared the study was indicative of many limitations for interpretation, validity, and reliability, as well as possible biases, indicating much future research was needed. Allport's seminal study led to further studies in this field.

In general, however, personality trait theory and theorists assume individuals have differing continuous traits that can be measured, despite variance between people (Carver & Scheier, 1992; Mischel, 1999). Therefore, personality traits could possibly be mediating variables in workplace performance; however, future scholarly inquiry may elucidate more significant insightfulness.

**Emotional Intelligence**

**Emotional Intelligence Theories and Models**

In 1990, Salovey and Mayer did a study based on a meta-analysis on meta-mood experiences to identify a framework for statistical analyses in scale development and measurements. Salovey and Mayer (1990) introduced the *emotional intelligence theory* as a predictive theory to explain insightful information processing, underlying individuals' behavioral intentions, and the importance of emotional intelligence.
Furthermore, emotional intelligence has been operationalized as an abilities model (Brackett & Mayer, 2003).

According to the theory, emotional intelligence is an individual’s ability to accurately appraise aspects of emotions in one’s self and others (independent variable), as well as the ability of an individual to appropriately express one’s self, and come to consensual agreements during human interactions (dependent variable), by regulating mental processes (Salovey & Mayer, 1990). However, individuals have different capacities and abilities for understanding and expressing emotions; and it is these individual uniqueness factors which make scale development for measuring EI more difficult (Salovey & Mayer, 1990).

Historically, intelligence in general, has been defined in various ways. Furthermore, the theory of intelligence has been revised by several psychologists (Salovey & Mayer, 1990). Salovey and Mayer, however, based their initial definition of emotional intelligence on Wechsler’s 1958 definition of intelligence (as cited in Salovey and Mayer, 1990). Wechsler’s definition of EI defines emotional intelligence as the capacity for individuals to “act purposefully, to think rationally, and to deal effectively with their environment” which is the predominant theory used to examine traditional intelligence concepts (as cited in Salovey & Mayer, 1990, p. 189).

Although the major propositions of the cognitive theory are well developed and adapted to motivational factors in one’s life and in organizational populations, empirical support has been weak (Salovey & Mayer, 1990). Salovey and Mayer indicate the theory is complex, but emotional intelligence is socially significant, addressing essentials of direct and indirect relationships among concepts for emotional
regulation in the discipline of psychology. Additionally, the theory is useful in explaining, predicting, and discriminating among those with emotional intelligence and those who have low emotional intelligence (Salovey and Mayer, 1990). However, the study although grounded in seminal data was weak. It was not discussed what psychometrics should be used to best measure this construct. Therefore, future research is needed to address this limitation.

In 1995, Mayer and Salovey conducted another meta-analysis for the purpose of evaluating fragmented constructs of EI, to stimulate further investigation, for a more interrelated theoretical concept, despite the available plethora of research. Reviewed in the analysis were the following: regulation of emotions, a re-examination of processes of mood regulation constructs in emotion, and personality to determine how emotional intelligence for information processing, may be related to social competencies and adaptive behavior in various settings. Processing information, involves both cognitive and emotional systems, considered basic constructs of personality (Mayer & Salovey, 1995).

The study examined three levels of consciousness: lack of consciousness, low levels of consciousness, and high levels of consciousness (Mayer & Salovey, 1995). The propositions in the study focused on adaptability for emotional construction, emotional regulation, and flexibility. Qualitative, individual differences regarding cognitive and emotional systems were based on historical, empirical data and compared and contrasted with various theories. Four propositional models were discussed as possibilities to further examine three levels of emotional regulation. The
models were based on common assumptions, with multiple alternatives, which may contribute to bias.

The ability scales described in the above study attempted to evaluate the skills necessary to evaluate emotions in one’s self and others; however, the complexity involved in appraising emotions appeared to be multifaceted, making it difficult to generalize, due to individualism. Additionally, the study did not examine individual personalities.

Examination of scales and underlying constructs considered to operationalize emotional intelligence revealed the necessity to research individual differences used in information processing for two major purposes (Mayer & Salovey, 1995). Firstly, it seemed prudent to understand the differences in individual capacities to express emotions, based on individual perceptions.

Secondly, it appeared to be necessary to elucidate if these differences might be connected to existing skills that may be changed through various instructional techniques (Mayer & Salovey, 1995). However, hypotheses were weak, although grounded in philosophy and contemporary psychological research, and additionally lacked statistical validity.

The major strength of the review attempted to fill a gap in the literature, revealing the existence of a somewhat larger gap that was initially anticipated in this field of study, since it was verbalized that there was uncertainty of how to apply the emotional intelligence theory to meta-experiences for adaptability and mood regulation. Use of possibly better psychometrics to measure emotion was suggested and a major strength of the study.
In 1995, Mayer and Salovey did a conceptual study on the regulation of feelings and emotional intelligence and emotional awareness, using four models. Several propositions were discussed regarding emotional reactions and modulation of feelings; however, the internal validity was inconclusive (which hampered the external validity), because feelings are regulated to fit specific contexts; and individual differences arise in emotional responses, as well as within group contexts (Mayer & Salovey, 1995). Furthermore, emotional awareness can only be partially measured with the use of the Levels of Emotional Awareness Scale (LEAS) (Mayer & Salovey, 1995). In addition, “people’s emotions appear to develop in complexity over time as evolutionary-based systems are influenced by social and cultural settings” (Mayer & Salovey, 1995, p. 201). Little research has been done on regulatory styles, according to Mayer and Salovey. This created limitations for the study both for internal and external validity. Mayer and Salovey (1995) indicated using “alternative criteria being developed for the measure of emotional intelligence, that is, that do not involve emotional intelligence and regulation” (Mayer & Salovey, 1995, p. 204).

A possible strength of the study conceptualized the utility of emotional intelligence research for future applicability in the fields of clinical psychology and personality. Although subsequent empirical studies by Salovey and Mayer lead to the refinement of the emotional intelligence theory, it remains evident that much more future research is necessary, not only to examine emotional intelligence in individual personalities, but to further refine the definition of emotional intelligence to discuss the regulation of emotions, as well as to develop better psychometrics to gain wider acceptance, specifically within the research community.
Emotional Intelligence Measurement

Mayer, DiPaolo, and Salovey (1990) conducted a causal comparative study. The purpose of the study was to examine logical information processing and the ability to perceive individual differences through visual stimuli (dependent variable) for purposes of examining consensual agreement (independent variable) in basic human emotions. Consensus was defined as the consensually agreed upon emotions by participants, as either present or not present during responses to emotional scales. The hypothesis for this empirical study was that logical thought would lead to consensual agreement (Mayer et al., 1990). Empirical studies of emotional intelligence were reviewed, revealing a major gap.

Mayer et al. (1990) used an experimental, quantitative, causal, comparative design with 139 subjects ranging in age from 17 to 63 years of age, who were art, psychology, and law students, as well as individuals from an engineering company. The entire test took about 25 minutes, with Part I of the research design “consisting of 18 visual stimuli comprised of 6 facial images, 6 colors, and 6 abstract designs” (Mayer et al., 1990, pp. 775-776). Part II consisted of three criterion measures: (a) a 33-item scale to measure empathy, (b) a 26-item four-factor scale for alexthymia (individuals who have problems recognizing their own feelings), and (c) a shortened version of the Eysenck Personality Inventory to measure extraversion and neurotic behavior (Mayer et al., 1990). According to the researchers this will predict EI.

Their literature appeared to be somewhat thorough, but not current, and ethical aspects were not described. Two hypotheses were indicated to detect dispositional variables, indicating humans are not preprogrammed to evaluate emotions for external
visual stimuli, but rather that individuals’ perceptions are interrelated with perceptions in other domains, and “people who can accurately perceive emotion should know their emotions and be generally able to accept internal experience such as affective imagination and fantasies, as well as be more empathetic to other people” (Mayer et al., 1990, p. 775).

Incorporated in the design were scoring measures predicated on consensus for the visual stimuli. Standard deviation was used to measure the range of responses (Mayer et al., 1990). The interpretation for the findings resulted in identifying that healthy individuals with higher levels of emotion and empathetic behavior had the ability to discern thought processes; and, those with lower levels of emotional ability had negative external perceptions, due to internal experiences, possibly related to personality traits. This led to the following conclusions: individuals with a high degree of good interpersonal skills experience enhancement of life, whereas those with lesser interpersonal skills experience lower degrees of life enhancement experiences. This further led to developing a scale for measuring EI discussed below (Mayer et al., 1990).

Personality traits were not expanded upon, demonstrating limitations. The limitations reported by Mayer, DiPaoli, and Salovey (1990) were problems with using a small group of subjects in the study, as well as the reliability and validity of the scales used, “due, in part, to the fact that developers of the scales concentrated on the properties of the stimuli, rather than on measurement of participants’ responses” (p. 774). Lack of measurements encompassing participant responses created an additional limitation, indicating scale measurements needed to be developed to measure EI.
A key strength extracted from the research was that empathy was considered a core factor of emotional intelligence. Those who had the ability to empathize had a better understanding of social processes (Mayer, DiPaoli, Salovey, 1990). This implies the need for future studies to examine the interplay of empathy, how emotions are regulated, and how social processes are involved and consensually understood to help identify emotionally intelligent people.

In 1998, Mayer, Caruso, and Salovey developed the Multifactor Emotional Intelligence Test (MEIS), a scale of measurement to test mental abilities for emotional intelligence (Mayer et al., 2001). This scale was based on the four branch model Mayer and Salovey introduced in 1997, regarding emotional intelligence. The scale was comprised of “four classes or “branches” of abilities including (2) perceiving, (b) assimilating, (c) understanding, and (d) managing emotion,” using twelve ability tasks of personal performance (p. 97). However, the MEIS, was further developed by Mayer, Salovey, Caruso to improve the psychometric properties of the MEIS (Mayer et al., 2001). The new scale for this purpose is called the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT©) using eight ability tasks of personal performance (Mayer et al., 2001, 2003). According to Mayer et al. (2003) the MSCEIT© yields a more comprehensive emotional intelligence score, with additional subscale scores for emotional intelligence. The most recently developed standardized scale to measure emotional intelligence is the Mayer-Salovey-Caruso Emotional Intelligence Test version (MSCEIT© V2.0), using the 141-item scale (Mayer et al., 2001; Mayer et al., 2003), as discussed in the introduction.
Mayer et al. (2003) conducted a correlational study for the purpose of clarifying “issues of scoring, of reliability, and of viable factorial representations” (p. 191). There were two hypotheses. The first hypothesis claimed that emotional intelligence was part of social interaction and communication. The second hypothesis indicated the expert group would have higher scores on emotional intelligence than the general group (Mayer et al., 2003).

The study involved correlating these two groups mentioned above. The test was administered to group one (the general consensus group), a targeted general population either in person or on-line (depending on the availability of Internet services). The MSCET© was given in English, to 2,112 adults, ranging in age from 18 to approximately 69 years of age, in 36 academic contexts, from the United States, South Africa, India, and Canada. The participants were tested by independent researchers. (Mayer et al., 2003).

Group two was comprised of volunteers from a 2000 meeting of a society purposively created (in 1984) to promote scientific research on emotions, the International Society for Research on Emotions (ISRE), who were considered the expert consensus group (Mayer et al., 2003). However, compared to the vast amount of respondents in group one, only twenty-one, so-called experts from eight Western countries were participants (11 females and 10 males) (Mayer et al., 2003).

The test had a variety of limitations. Results were confounded by the fact that practical sense would dictate those respondents in group two (expert group) would evidently score higher on emotional intelligence than group one (the general group). Little to no demographic information was discussed other than the number of males or
females in each context, the skewed numbers for educational attainment, and skewed numbers for ethnic diversity. The reasons for choosing the particular contexts or countries were not revealed. The internal validity was not evident, indicating external validity was also lacking. The hypotheses appeared to be based on practical assumptions, further indicating possible bias. Reliability of the instrument did not supply enough supportive data for the theoretical model. Therefore, generalizability cannot be applied under the guidelines of this study. Because the research study appeared to be extremely weak by design, it is recommended that future scholarly inquiry is necessary.

However, Mayer et al. (2001) maintain that the abilities test, such as the MSCEIT© reveal those who understand his or her own emotions and those who do not understand his or her own emotions. The MSCEIT© does not appear to measure workplace performance or personal success. Additionally, Mayer et al., 2001 contend that personality traits would need to be further researched involving intensive personality testing to understand success. The MSCEIT© merely measures emotional abilities through task performance tests; however, it may help reveal appropriate career choices (Mayer et al., 2001). Furthermore, it is indicated that the MSCEIT© is an objective measure of emotional intelligence, based on consensus scores, which are said to correlate with other intelligences, show unique variance, as well as scores increasing with age (Mayer, Caruso, and Salovey, 1999). However, the MSCEIT© did not appear to be as objective as the authors contended. There may be possible bias, due to consensus scoring, because of the population used for this purpose.
Emotional and Social Intelligence

Emotional and Social Intelligence Theories and Models

The theory of emotional and social intelligence (ESI) is a mixed-model, combining emotional intelligence theories and social intelligence theories regarding an individual’s emotional expression for social and individual adaptability (Bar-On, 2005; Bar-On et al., 2006). The foundation for the Bar-On (2005) model of emotional and social intelligence which Bar-On recently began referring to as emotional-social intelligence is based on theoretical constructs, predicated on Darwin’s (1920) conceptualizations of emotional and social intelligence for individuals.

The framework of Bar-On’s (2005) model provides for five major factors to be examined, which are: (a) recognizing, understanding, and expressing emotions and feelings; (b) understanding how others feel and how one relates to others; (c) managing and controlling one’s emotions; (d) managing, changing, adapting, and solving problems for personal and interpersonal purposes; and, (e) generating a positive affect as well as having the wherewithal to be self-motivated.

According to this theoretical model, social and emotional competencies are interrelated and necessary to understand one’s self and others during social interactions for social effectiveness, which encompass socially significance constructs (Bar-On, 2005, Bar-On et al., 2006). Although Bar-On (2005) maintains that not enough variety in research has been done to examine relationships of human performance, Bar-On indicates that human resources and organizations should use his model and the EQ-i to hire and train individuals, as well as for succession planning. Bar-On contends this would help elevate individual effectiveness and promote better organizational
productivity (Bar-On, 2005; Bar-On et al., 2006). The Bar-On model of emotional-social intelligence may have a significant impact on many areas of human performance (Bar-On, 1997; Bar-On, 2002). However, it is premature to indicate if this holds true, since not enough research in this area can give an ample amount of scientific credence to this claim.

**Emotional and Social Intelligence Measurement**

The Emotional Quotient Inventory (EQ-i™) is a self-report measure of emotionally and socially intelligent behavior that provides an estimate of emotional-social intelligence,” based on the five elements described above (Bar-On, 2005, p. 4). The Bar-On (2005) EQ-i™ is a robust scale of measurement (based on Darwin’s aforementioned competencies) used to assess emotional intelligence competencies and is scored via computer, using a five composite Likert-type scales and 15 subscales. The instrument contains 133 items which are short sentences. The EQ-i™ is an appropriate test to be administered to individuals over the age of 16. Administering the test takes anywhere from one half hour to approximately 40 minutes to complete and possibly less time if taken via the Internet (Bar-On, 1997; Bar-On, 2002). The following lists the five scales from the EQ-i™ within which the 15 subscales are embedded (Bar-On, 1997, Bar-On, 2002; Bar-On, 2005):

1. intrapersonal (self-regard, emotional self-awareness, assertiveness, independence, and self-actualization)
2. interpersonal (empathy, social responsibility, and interpersonal relationship)
3. stress management (stress tolerance and impulse control)
4. adaptability (reality-testing, flexibility, and problem-solving)
5. **general mood (optimism and happiness).**

The first study (validation study) to show a direct relationship between occupational performance and ESI was conducted with 1,171 United States Air Force recruiters to examine the relationship between ESI and annual recruitment quotas, based on United States Air Force criteria: high performers (those able to meet a 100% quota) and low performers (those who met less than 80%) (Bar-On, 2005). The directional hypothesis for this correlational study maintained ESI scores had a relationship with occupational performance (independent variable). In correlational studies, using a large number of subjects (or cases), "you do not need high values of the correlation coefficient to produce statistical significance" (Anderson, 2004, p. 117).

However, before 1996, the USAF spent about $3 million for an average of 100 mismatched individuals per year. For one year ESI screening was done using ESI screening, and interviewing. "A discriminant function analysis indicated that EQ-i™ scores were able to fairly accurately identify high and low performers, demonstrating that the relationship between ESI and occupational performance is high (.53) based on the sample studied" (p. 15). According to Bar-On (2005) ESI predicted success of recruiters the first year attrition rate was considerably reduced, which helped cut financial losses by almost 92%, resulting in a report to the Congressional Committee of the United States, completed the United States Accounting General. The self-report survey measures have low reliability and very limited construct validity. The EQ-i™ excludes cognitive factors that may have contributing causal variables for emotional intelligence because in correlational studies there may be factors contributing to the
relationship that have not been controlled, as in an experimental design (Anderson, 2004). Additionally, there is a great deal of overlap between the Big Five Factor model for personality and the self-report questionnaire scales for emotional intelligence (MacCann et al., 2003). However, the United States Air Force (USAF) study utilizing the EQ-i™ conducted to directly assess “the impact of emotional intelligence on occupational performance” had significant results (Bar et al., 2006). Despite this evidence, MacCann et al. (2003) contend that validity for the EQ-i™ is weak since it is not certain whether validity for the relationships of variables come from EI or from personality.

Although Bar-On has completed studies in various settings, and the EQ-i™ is the most widely used instrument globally, more studies need to be replicated in diverse settings for a wide variety of human performance, with controls for work knowledge, general intelligence, and personality (Bar-On et al., 2006). The study appears to be limited in scope, disregarding causality of possibly other underlying factors contributing to the association. Bar-On (2005) shows only one particular view of individuals’ capacities (emotionally and socially) without rigorously showing strong validity or reliability. Although, it is the most comprehensive and only direct measure to indicate workplace (occupational) performance and successful outcomes (Bar-On et al., 2006). However, self-report instruments may be biased and confound results (Matthews et al., 2004). The USAF validation study implicates further research in this field of study is needed.
Workplace Performance

Traditional organizational systems avoid change, due to the nature of conflicts that may arise. However, organizations “who try to eliminate conflict, are operating under outdated paradigms” that fail to encompass this “natural phenomenon in groups and organizations” (Shelton & Darling, 2004). Effective workplace performance involves reciprocal social interactions and managing emotions (Akgun, Lynn, & Byrne, 2003; Shaffer & Shaffer, 2005; Shelton & Darling, 2004).

Akgun et al. (2003) conducted an ethnomethodological study from the discipline of sociology, including epistemologies and ontologies from different fields and disciplines to understand organizational interactions and cognition. The study identified social cognition as the independent variable in organizational learning (dependent variable) in workplace through social interaction (mediating variable). Several learning theories are used for the model, such as behavioral, cognitive and social construction theories, as a way to bridge the gap, representing a multi-level perspective of cognition. This appears to give strength to the model since it includes a multi-faceted approach to organizational learning and information-processing factors.

The study’s major proposition is social cognition because it incorporates multiple interactions attributed to organizational learning Akgun et al. (2003). The study demonstrates how utilizing multiple, socio-cognitive constructs can show statistically significant covariance. Furthermore, this study has social utility for organizational practices and workplace performance. It is a well developed guide to organizational learning. In addition, the ethnomethodological study has good balance between simplicity and complexity, contributing to its usefulness for workplace performance. However, the
socio-cognitive constructs had limitations, and should have empirically based research, with operationalized constructs for future utility. Future scholarly research is needed.

**Individual Work Performance**

Current evidence recognizes the importance of the effectiveness of social skills in the workplace (Akgun, Lynn, & Byrne, 2003; Bar-On, 2005; Douglas et al., 2004; Shaffer & Shaffer, 2005; Shelton & Darling, 2004). This contributes to career satisfaction and workplace performance (Bar-On, 2005; Douglas et al., 2004; Smith & Randolph, 2005). Individual workplace performance is predicated on the job holder role and defined as the multidimensional expectations and role behaviors needed to fulfill workplace performance (Welbourne, Johnson, & Erez, 1997; Welbourne, 1998; Welbourne, Johnson, & Erez, 1998). Cherniss and Goleman (2001) claim that employees with higher emotional intelligence exhibit behavior that contributes to fundamental business practices, promoting human effectiveness in organizations at individual levels, impacting and influencing other employees attributed to an individual’s emotional intelligence behavior.

**Models and theories.**

The *attribution theory* entered organizational literature in 1979, but was first introduced, in 1954, by Fritz Heider, and developed over time by social psychologists, as a concept of how people explain behavior (causes and events) and how cognitive perception affects motivation (as cited in Ashkanasy, 2002). The major propositions were that as individuals, these individuals formulate causal hypotheses for the observed behavior, and in turn meanings and explanations are thus formulated to explain the behavior. According to Ashkanasy (2002), if this is how people explain their cognitive
perceptions of behavior and motivation, this concept would hold much social utility in the workplace. Additionally, it is socially significant for organizations to address behavioral responses of employees for explaining, predicting, and discriminating ability (Ashkanasy, 2002).

The theory appears to have a good balance between complexity and simplicity, contributing to its usefulness because it encompasses both internal constructs (situational attribution) and external constructs (dispositional attribution). Studies by Ashkanasy (2002) verify the propositions of the attribution theory.

Furthermore, in the attribution model, leaders observe employee behavior and attribute causal responses based on employee behavior. The theory has been adapted to various work environments; however, it appears the internal constructs are more difficult to examine than the external constructs in information processing for causal attribution, suggesting limitations.

One competing theory is the affective events theory (AET) (Weiss & Cropanzano, 1996) which states that the work environment has both conflicts and uplifting experiences for employees which accumulates over time, creating positive and negative behavior and attitudes (Ashkanasy, 2002; Weiss & Cropanzano, 1996). However, Ashkanasy (2002) maintains even though the Job Affect Scale (JAS) and the Job Emotions Scale (JOB) have been used in laboratory studies to test the affective events theory, Ashkanasy did not state what type of results have been gleaned or who the participants were, additionally stating more research is still underway; however, based on the limited data Ashkanasy did imply that attitudes and behaviors are mediated by emotions.
Furthermore, there is an incredible paucity of field replication to support mediating effects of emotion to lend credence and support for AET. Although the theories Ashkanasy (2002) addressed have important implications for future research, the study was limited in scope. Additional research is therefore recommended.

Another competing theory is Festinger’s theory of cognitive dissonance which involves how bound and committed an individual is, which determines the interactions one adopts to deal effectively in situations (as cited in Nikolaou & Tsaousis, 2004). The theory regards one’s ability to develop a sense of one’s self and others, to conceptualize human interaction processes, and be responsible for one’s actions (Nikolaou & Tsaousis, 2004). A stress model has been used to indicate occupational stress in organizations (Nikolaou & Tsaousis, 2002).

Additionally, over the past fifteen years, within the majority of organizations in the United States, the standard type of employee performance has become team-based workplace performance (Wolff, Druskat, Koman, & Messer, 2006). This makes the importance of assessing whether an individual’s emotional intelligence contributes to other individuals in workplace performance (Cherniss & Goleman, 2001; Lopes, Cote, Salovey, 2006; Silberman, 2001; Wolff et al, 2006). Therefore, it is important to recognize and assess individuals’ feelings and those of others for effective workplace performance (Ashkanasy & Dashborough, 2003; Silberman, 2001; Wolff et al., 2006). According to Silberman (2001), when working in an organizational system, it is increasingly important for individuals to recognize emotions of one’s self and others, manage emotions with positive feedback, and collaborate with others for optimum results. This involves examining individuals within the organizational system.
Systems theory has been used to study open systems and change (Kuhn, 1996). This is based on taking in new information. By disrupting the equilibrium of a system transformational changes can take place (Kuhn, 1996; Shelton & Darling, 2004). “New information is the catalyst that disrupts a system’s equilibrium” (Shelton & Darling, 2004). Traditionally, the systems theory is embedded in Kuhn’s seminal work, which involves a continual feedback loop, providing for homeostasis to occur. The problem with this theory is it does not indicate hard systems methodologies, because theories are defined as “an abstraction from and representation of the ordering principles that govern a class of concrete systems or a realm of systemic order (Boggs et al., 2004, p. 187).

Wang and Ahmed (2003) did a conceptual study, based on critical analysis and the systems theory, including individual emotions, encompassing values and perception, as well as human well-being, individual learning abilities, and creativity in understanding the role of emotion. It is proposed these elements are part of individual systems, drawing from various disciplines, which encompass a wide range of possibilities, based on several empirical studies, indicating emotional intelligence has an impact on organizational success and performance for problem solving; however, little is indicated in formalizing what needs to be done. However, the ability of individuals to work effectively together will affect performance (Campion et al., 1993; Rapsisarda, 2002). Although, Wang and Ahmed (2003) contend emotion (independent variable) is intrinsic to effective systems (dependent variable), it is important to know how this is intrinsically linked.

Even though the systems theory has balance between simplicity and complexity, it is weak in showing how it is linked to emotional intelligence for
problem solving. Newer, more contemporary theoretical models might better explain the relationships of the variables, to replace prior, established theoretical models for application in workplace performance (Wang & Ahmed, 2003).

Smith (2005) introduced a new theoretical model to investigate competencies in the workplace. The purpose was to research socialization and systems thinking under a new framework, “communities of competence,” for individuals, groups, and organizations, which was designed to address core competencies for goal orientation and selection criteria for group assignment (p. 7). The theory was grounded in sociological, seminal theory, as well as systems theory. The proposition made was to use what is already known. Since what is known is limited in scope, this implies further research is necessary.

**Measurement of workplace performance.**

A quantitative, correlational, survey research was conducted by Nikolaou and Tsaousis (2002) to explore the relationship between occupational stress and emotional intelligence and causality for stress levels. A convenience sample was used. The sample population used included 212 mental health professionals that participated in completing a self-report questionnaire, using the Emotional Intelligence Questionnaire (EIQ) originally proposed by Mayer and Salovey (1995). The other research measurement used was the Organizational Stress Screening Tool (ASSET) used for all occupations to measure stress in the workplace.

It was not indicated how Nikolaou and Tsaousis (2002) obtained the sample population for this particular study, other than it was conducted in a mental institution (target population). Emotional intelligence was the independent variable, job stress
was the dependent variable, and the intervening variables were gender, age, and education attainment, but the table indicating the variables also included family status, as another intervening variable, which was not included in the initial discussion.

The major proposition stated that individuals with high emotional intelligence experienced lower stress levels in the workplace, due to emotional intelligence for information processing. The study was based on empirical studies using the emotional intelligence model proposed by Mayer, Salovey, and Caruso (Nikolaou & Tsaousis, 2002). Nikolaou and Tsaousis used the EIQ, a self-report measure with 91 statements, for which the sample population uses a Likert-type scale for rating (1 is not representative of a particular emotion and 5 is highly representative).

Descriptive statistics were used to measure the variables (Nikolaou & Tsaousis, 2002). Pearson correlations coefficients were used for age and emotion which resulted in low negative findings between age and control of emotions, age, understanding and reasoning, and age and overall emotional intelligence, but positive with low correlations for stress factors for age and workplace relationships, age and control, age, salary, and work benefits, and age and overall stress.

Another finding resulted in correlational significance for overall emotional intelligence (all variables) and amount of education. ANOVAs were conducted in this research design to investigate job specialties. This was statistically significant indicating emotional intelligence and stress levels were affected by types of employment involving a high amount of education (i.e. medical professionals). Also, independent t-tests were performed on the employees who were additionally divided into two distinct groups: those with high emotional intelligence and those with low
emotional intelligence, using a mean score. The researchers claimed their results coincided with other researchers; however, it was not indicated in what way.

Furthermore, the researchers did a hierarchical aggression analysis to investigate commitment as part of individual stress levels, using two commitment scales for commitment of employees and commitment of organizations to the employees. A multiple regression indicated a statistical significance for these contextual variables with medical employees scoring significantly higher than other employees (Nikolaou & Tsaousis, 2002).

The findings have strong implications for the main relationship between occupational stress levels, and emotional intelligence, and job commitment showing some validity for the cross-sectional design (Nikolaou & Tsaousis, 2002). The limitation and weakness of the study was due to the work environment in which the study was conducted. The study needs to be replicated in various work environments to determine whether the research can be generalized to other work environments for validity and reliability to have a deeper understanding the causal effects of emotional intelligence in the workplace. This indicates further research needs to be provided in other work environments. According to the literature review thus far, other than Bar-On’s EQ-i™, there does not appear to be a so-called direct measure for emotional intelligence and workplace performance (Matthews et al., 2004).

Jordan, Ashkanasy, Hartel, and Hooper (2002) conducted a causal-correlational study to investigate emotional intelligence for individual performance and the relationship and application to team performance using quantitative convergent validity to determine causality. The sampling group was 448 Australian undergraduate
students in a managerial course, placed in three to seven person teams for learning purposes. The study did not indicate what other criteria was used to separate the teams, which has little reliability or validity for replication in organizational settings and possible bias.

The researchers developed The Workgroup Emotional Intelligence Profile, Version 3 (WEIP-3) using three specific scales, based on Salovey and Mayer’s (1990) original emotional intelligence construct. The purpose of the study was to investigate if the new research tool (self-report with 52 items) would correlate with the existing measurement tools. An exploratory factor analysis was used with convergent and discriminant validity to determine the three scales: one’s ability to deal with one’s emotions, one’s ability to deal with others’ emotions, and one’s ability to use emotions for solving problems and making decisions. Seven factors were included: “(a) awareness of own emotions, (b) ability to discuss own emotions, (c) use of own emotions to facilitate thinking, (d) ability to recognize others’ emotions, (e) ability to detect false displays of emotions in others, (f) empathetic concern, and (g) ability to manage others’ emotions” (Jordan et al., 2002, p. 206). Descriptive statistics were given for the scales and subscales convergent and discriminant validity was tested for, with the strongest correlational result for self-monitoring.

The study had several limitations. One of the limitations of the study was the self-report measure. Other limitations of the study were that the new measurement did not measure before and after effects of training to know whether learning was an intervening variable. The study did not show reliability or validity of the new
measuring tool devised for the research purpose, which indicates the need for areas of future studies.

Rapisarda (2002) conducted a two year longitudinal, quantitative-qualitative correlational study during a two year curriculum on emotional intelligence, to determine its effects on individuals working together, specifically for team performance and team cohesiveness, using descriptive statistics, based on theoretical concepts and empirical studies. The major purpose of the study was to investigate small groups, cohesiveness, and performance to examine the interconnectedness of emotional intelligence and social interaction, using a convenience sample population of targeted MBA students (Rapisarda, 2002).

Emotional intelligence data was obtained over a two year period from faculty members who interacted with the students and the students through self-assessment questionnaires (Rapisarda, 2002). The measurements used were the Self-Assessment Questionnaire (SAQ) developed from studies of executives in North America/External Assessment Questionnaire (EQA) developed by business peers, and the Emotional Competency Inventory, introduced by Goleman. Both surveys measured 13 competencies: self-awareness, self-confidence, self-management, achievement orientation, initiative, conscientiousness, self-control, adaptability, social awareness, empathy, social skills, influence, communications, leadership, conflict management, building bonds, and developing others (Rapisarda, 2002).

The results exploring emotional intelligence for cohesiveness and team performance were significant. These results indicated emotional intelligence was highly correlated with group cohesiveness more than group performance. Two
competencies, performance achievement orientation and empathy were correlated for student and faculty performance (Rapisarda, 2002).

Although the study contributes to the elusive emotional intelligence theory and how it applies to team groups the research had limitations. Individual students rated their experiences when the program concluded and students' grades (A's and B's) which might have impacted valid answers for self-report questionnaires, indicating possibly bias, due to self-report. Furthermore, although it is possible that empathy may have been the cause for study group partners to adjust assignments for group members leading to higher performance achievement, this aspect of the study possibly needed more research. Additionally, not enough background information was known about the individuals, prior to forming team-based groups, indicating that it is first necessary to examine individuals before teams are formed.

Even though this study may have application for individuals and team-based groups and recognizes the importance of emotional intelligence and empathy, compensatory behavior needs further investigation, particularly for communication, which encompasses individual interpersonal social skills. The study did not examine the significance of communication as an intervening variable, placing limitations on the study.

Although emotional intelligence demonstrates individuals influencing team functioning, it is not clear how to determine which variables were most significant. The research study merely indicates possible causality. Therefore, it is concluded that more research is needed, with better research design, and replicated in various
organizational settings that might better elucidate causality to yield more significant results.

Emotional Intelligence and Workplace Performance

Goleman (1998) indicates the emotional framework for personal competencies is necessary to determine how an individual manages one’s self, to create synergy in the working with others. Goleman (1998) developed an emotional competency inventory (ECI) which was designed after doing a critical analysis of existing literature, as well as referencing prior work done by Salovey and Mayer (1990). Goleman includes the following personal competencies claiming that emotional intelligence should be measured using his framework of five broad, but specific scales and subscales (a multi-rater model):

**Self-Awareness**: emotional awareness, accurate awareness, self-confidence.

**Self-Regulation**: self-control, trustworthiness, conscientiousness, adaptability, innovation.

**Motivation**: achievement drive, commitment, initiative, optimism.

**Empathy**: understanding others, developing others, service orientation, leveraging diversity, political awareness.

**Social skills**: influence, communication, conflict management, leadership, change catalyst, building, collaboration, team capabilities.

According to Goleman (1998) understanding the relationships of the five dimensions of emotional intelligence and the 25 emotional competencies would help in profiling individual strengths and weaknesses. However, other than self-report
measures, it has been difficult to measure for reliability and validity, indicating possible bias.

Furthermore, pre and post-tests should be given because drawing conclusions from one self-report instrument may not hold valid or reliable results for internal validity. This would additionally make it difficult to indicate external reliability and generalizability. Regardless, Goleman (1998) has yet to show a causal link, based on any type of empirical evidence for the positive effects emotional intelligence has in the workplace for workplace performance.

Accordingly, Barchard and Hakstian (2004) used many instruments to measure emotional intelligence since it was felt that it may be necessary to include measures for emotional intelligence ability and personality traits. Barchard and Hakstian (2004) conducted a methodological study to provide more validity to the measure. The study was done to examine emotional intelligence, with cognitive ability and personality traits using factor analysis, with the primary factor intercorrelations of (a) emotional congruence, (b) emotional independence, (c) social perceptiveness, (d) alexithymia, (e) and social congruence. The main purpose of the study conducted was based on the premise that using a wide array of instruments may yield greater results to make it possible to generalize because more content is needed to determine the dimensions which underlie emotional intelligence abilities (Barchard & Hakstian, 2004).

A convenience sample of two groups of students (total of 176 students), at the University of British Columbia was used to examine the concept of emotional intelligence to propose subfactors. Various tables were included, particularly since so many variables were included, but not fully discussed, and the authors attempted to
include multiple measures, using measures initially designed to test for emotional intelligence, alexthymia, social intelligence and empathy because “for some of these constructs it was not possible to obtain multiple measures of just the one construct,” (Barchard & Hakstian, 2004, p. 441). “Participants completed measures of EI, cognitive abilities, and personality traits. All maximum-performance measures were completed under the supervision of a trained research assistant” (Barchard & Hakstian, 2004, p. 442).

Based on empirical studies, commonly described emotional intelligence constructs were examined. For emotional intelligence ability the following were tested: perception of emotions in the self; perception of emotions in others; perception of emotions in objects; managing emotions in the self; managing emotions in others; understanding emotions; social competence, and emotional integration. The personality traits examined were: attending to emotions; assertiveness; emotional expressivity; emotion-based decision-making; impulse control; motivation; optimism; responsive distress; responsive joy; self-esteem; and stress management.

Emotional intelligence was tested using the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT©) using 24 measures of emotional intelligence examined through exploratory common-factor analysis; four tests were used to measure social intelligence ( O’Sullivan-Guilford Social Intelligence [OGSI] combining both groups with only 150 participants using factor and correlational analyses (which resulted in indicating self-report measures were not useful in capturing the full dimensions of emotional intelligence abilities causing the researchers to retest using factor analysis and correlational analysis), Levels of Emotional Awareness Scale [LEAS], and seven
self-report measures for emotional intelligence ability. Twelve timed tests, using visualization and inductive reasoning tested cognitive abilities. The Big Five Dimensions (extraversion, agreeableness, conscientiousness, emotionality, and intellect) were calculated using scales adapted from the International Personality Item Pool (IPIP). A preliminary factor analysis was used for personality trait measures using the Minimum Residual (MINRES) method for each of the five major constructs. Barchard and Hakstian (2004) used cross-domain factor analysis correlating cognitive abilities with dimensions of personality using 33 measures. A positive relationship was found between social perceptiveness and extraversion, as strengths of the study, but emotional congruence showed the least relationship with personality traits and cognitive ability (Barchard & Hakstian, 2004).

Additionally, a self-report measure using factor analysis, revealed no compelling evidence. Factor analysis and correlational analysis were repeated for four cognitive abilities and the Big Five measures of personality traits. Once again, social perceptiveness had statistical significance with cognitive and personality dimensions, whereas emotional congruence showed very low correlations. It was also noted that verbal ability or inductive reasoning may have a relationship with emotional intelligence factors, but inconclusive.

A major strength of the study indicated that the tests resulted in showing maximum-performance tests are clearer indicators of emotional intelligence ability and social congruence is independent of personality dimensions and other cognitive abilities (Barchard & Hakstian, 2004). This is consistent with other tests, showing the emotional perception factor as independent of personality dimensions and cognitive
ability, and is consistent with prior tests. “In this study, however, measures that were not designed to measure Emotion Perception were associated with the same factor as the Emotion Perception measures, suggesting that this factor may be broader than Emotion Perception or might instead be a method factor” (Barchard & Hakstian, 2004, p. 460). This indicates more research is needed.

To conclude, the factor of emotional intelligence had a moderate correlation with social perception which was moderately correlated with inductive reasoning and verbal ability, and prior research has indicated emotional understanding had some correlations with other cognitive abilities (Barchard & Hakstian, 2004). A great variety of tests were used, but since it is not known which of the tests may tap into specific abilities such as verbal ability and inductive reasoning, given the “combined factor analysis of emotional intelligence, cognitive ability, and personality variables” future scholarly inquiry is suggested. Despite the fact that many tests and cross tests were completed for this study, more research for emotional intelligence might help determine what the underlying relationships are between all the variables tested for.

Additionally, the internal validity may not accurately reflect what has gone on in the experiment, due to the fact that peoples’ behaviors and experiences are continuously confounding experimental results, causal time order of tests being given are matters of importance, and age and gender factors should be taken into consideration as well. This may further taint external validity. However, although many research instruments were applied, better measuring instruments to examine emotional intelligence should be designed for measuring such a wide base of variables, particularly at one given time.
Douglas et al. (2004) conducted a correlational study based on the theoretical framework of Bar-On (2005) for the purpose of examining emotional intelligence as the mediating variable between workplace performance (dependent variable) and conscientiousness (independent variable), to investigate if the relationship between performance and conscientiousness is higher for those who have a high degree of emotional intelligence. Douglas et al. (2004) literature review provided significance for the study.

The correlational study had several propositions, leading to a complex hypothesis. The main proposition was that social effectiveness constructs might influence workplace performance. This led to the directional hypothesis, stating that performance scores would be positive for individuals with a high degree of emotional intelligence and low for individuals with a low degree of emotional intelligence.

Due to the wider acceptance of the EQ-i™ this self-report method was used to assess the non-cognitive factors moderating the ability to address environmental demands (Douglas et al, 2004, p. 3). Douglas et al., (2004) also used another psychometric measure, the self-report conscientiousness scale from the NEO-PI Personality Inventory consisting of fourteen items which is scored much like a Likert scale to examine conscientiousness, one of the dimensions of the Five-Factor Model (FFM) of personality, to report validity; however, the five dimensions of the FFM: conscientiousness, agreeableness, extroversion, openness to experience, and emotional stability were stated, but not thoroughly discussed (Douglas et al., 2004).

Additionally, a non-probability convenience sampling plan was used and data was collected from 205 predominantly white students in management classes,
attending a Southern university averaging 21.2 years of age (Douglas et al., 2004). Student participation was voluntary from two courses taught at the university by the same teacher. Classroom management methods were similar in both classes providing concurrent validity; however, those students who chose to participate were given extra credit for so doing, which may have tainted and biased the research design creating limitations.

During the first week of the semester, rosters were signed by students indicating their athletic and social affiliations Douglas et al. (2004). The students were divided into seven groups using random assignment, but, the study indicated that the male students were selected before the female students, which may additionally indicate bias. Furthermore, all groups had students with similar group affiliations, which did not appear to make the selection as random as the researchers had intended, and another possible bias.

Peer ratings and exams were used to rate performance. Douglas et al. (2004) entered three control variables: age, gender, and self-monitoring. In order to substantiate self-monitoring as a control variable, Douglas et al. (2004) used hierarchical regression analysis controlling for emotional intelligence, based on age and gender. A zero-order correlations result showed all the variables and intercorrelations indicating that emotional intelligence and conscientiousness were significantly related. "The moderate level of this coefficient is consistent with what might be expected given convergent and discriminant validity of these two constructs" (Douglas et al., 2004, p. 9). A moderated regression was used to show support for self-monitoring as a control variable which showed the range size above the effects size
normally found in non-experimental studies. Self-monitoring is not necessarily valid or reliable, posing more weaknesses and limitations of the study. Additionally, a statistics model was utilized to show the interaction of conscientiousness and emotional performance (Douglas et al., 2004).

Although the hypothesis was supported with hierarchical regression analyses, the nature of the study had several limitations: the sample was based on a specified population in a college setting; college students with minimal work experience in a classroom (limited ecological validity/setting) were used; therefore, the context did not parallel the natural working environment (threatening external validity) and generalizability. Furthermore, the study did not take into account age factors as possible intervening variables. It also appeared that the random assignment was somewhat skewed (selection based on high amount of white participants and few female participants) even though it was stated groups were made as comparable as possible from the start which again suggests bias making it apparent that future scholarly research is needed in a variety of organizational contexts to fill in the gaps in the literature for the relationships between emotional intelligence and individual workplace performance.

Many organizations use workplace assessment reviews to examine individual workplace performance; however, a combination of measuring workplace performance and emotional intelligence has not been the case. In particular, the university in this research study is currently using only one assessment tool for individual employee performance, the Performance Review Scale © (Administaff, Inc., 2006) which does not include measurements for emotional intelligence. The Performance Review Scale© was
initially designed and offered in April, 2004, and created by a combination of various domain experts in the field of performance management currently being utilized by over 40 thousand employers to review employee performance (Administaff, Inc., 2006). The Performance Review Scale© is considered a core survey tool comprised of competencies based on expert judgment in the field of human resource management, as defined by Administaff, Inc. (2006). Twelve competencies are scored using a five-point Likert scale with five as the highest score: (i.e. 5-outstanding performance, 4-exceeds requirements, 3-meets requirements, 2-needs improvement, and 1-unsatisfactory) (Administaff, 2006). The twelve competencies are as follows: job knowledge, quantity, quality, dependability, cooperation, initiative, problem solving, judgment, planning and organization, attendance and punctuality, written communication, and oral communication. Furthermore the instrument is not based on a specific theoretical concept nor are concepts of emotional intelligence included to be measured, despite the claim by various experts in the field of human resource management and the field of emotional intelligence that an assessment of emotional intelligence is important to examine in order to determine success in employee workplace (Ashkanasy & Dashborough, 2002; Bar-On, 2005; Bar-On, Handley, & Fund, 2006; Cherniss, 2000; Cherniss & Goleman, 2001; Diggins, 2004; Elfenbein, 2006; Feist & Barron, 1996; Kunnaratt, 2004; Lopes, Core, & Salovey, 2006). However, Administaff, Inc. (2006) claims the Performance Review Scale© is useful to determine workplace performance and can be differentiated from other survey instruments based on rating specified competencies, rather than rating specific duties and responsibilities to assess workplace performance. No empirical data has been shown to indicate this. However, unlike the
The intelligence quotients for intellectual ability or expertise in the workplace are no longer viewed as the leading factors for being hired or promoted (Goleman, 1995; Cherniss & Goleman, 2001). The construct of emotional intelligence is touted as what matters, because traditional rules are changing globally (Goleman, 1995, 1998; Chernis & Goleman, 2001). Emotional intelligence greatly affects the workplace (Ashkanasy & Dashborough, 2003; Bar-On et al., 2006; Cherniss & Goleman, 2001).
People effectiveness management skills create a higher degree of motivation and cooperation for individuals within organizations (Ashkanasy & Dashborough, 2003; Goleman, 1998; Cherniss & Goleman, 2001), as well as an increase in morale, workplace performance, productivity, and profitability, with a decrease in employee turnover (Goleman, 1998; Cherniss & Goleman, 2001).

However, it is necessary to take a multi-dimensional approach. This involves using several theories and models, from a wide variety of disciplines and fields to formulate a more encompassing theory to create a better model for research, with objective psychometrics to measure emotional intelligence (MacCann et al., 2003; Matthews et al., 2003; Zeidner et al., 2004). Additionally, if a sufficient number of studies could be identified, it is recommended that a strategic meta-analysis be conducted to target causal links between EI and workplace performance.

Researchers need to critically analyze the relationships between emotional and social intelligence (Ashkanasy, Zerbe, & Hartel, 2002; Christie, Jordan, Troth, & Lawrence, 2007; Lord & Kanfer, 2002; Matthews et al., 2004), as well as personality and individual differences, because emotional intelligence is a multi-dimensional construct (Matthews et al., 2004), and deemed an underlying component for success in the workplace (Abraham, 2006). Emotional intelligence is not a “one-size-fits” all construct, and is comprised of several variables (contextual, mediating, and intervening) encompassing both cognitive and non-cognitive skills, personality traits, social skills, biological factors, behavioral genetics, and a wide array of individual uniqueness (Matthews et al., 2003; Zeidner et al., 2004).
It is suggested that self-reports and psychometric measurement instruments should be replaced with objective performance tests, to show discriminant validity, predictive validity, and reliability, and to replace current psychometric tools (MacCann et al., 2003). Matthews et al. (2003) maintain standardized tests should replace other psychometric measures, as well as “be amenable to behavioral genetics investigations” (p. 113). Even though many researchers do not see self-report as a valid measurement, others believe it may be valid for measuring emotional intelligence (Bar-On, 2005; Goleman, 1995).

Although much future research is needed to examine EI, at the present time, Bar-On and Mayer, Salovey, and Caruso appear to have well-developed models, with the most comprehensive tests to indicate “some” significant empirical validity, utility, and general adequacy in explaining EI. However, it is recommended that a vast amount of construct validation studies be conducted for each of these psychometric tools to determine validity and reliability.

The major predictors in these models are that individuals with higher levels of EI will perform better than those with lower levels of EI. However it is suggested that many EI researchers might look into conjoining with researchers of other disciplines and fields of research to combine various viewpoints, theories, and models, and to develop more sophisticated psychometrics for EI (Matthews et al., 2003). This combination might help elucidate a higher degree of objectivity when measuring EI.

Gardner (1999) recommended using longitudinal studies. Research that might use a combination of both quantitative and qualitative research methods for this
purpose to obtain richer information may hold utility for a vast variety of fields and disciplines (Gardner, 1999; Rapisarda, 2002).

**Theoretical Framework**

The theoretical literature review primarily included individual theories, with a smattering of partially combined theories and models to create a larger theoretical base, to encompass the ability to address modern day organizations. This all needs an inordinate amount of future fine tuning at multiple levels embracing a variety of fields and disciples for scholarly inquiry (Matthews et al., 2004). It is suggested that a clearer understanding of emotional intelligence is needed to move forward regarding the theoretical arena (Matthews et al., 2004). Systematic frameworks addressing individual differences are needed in order to encompass various constructs (Matthews, Roberts, & Zeidner, 2003). “Constructs linked to ‘emotional intelligence’ should be sufficiently broad that they may be abstracted from specific contexts and social interactions” (Matthews et al., 2003, p. 113). It is also necessary to understand how emotional intelligence in the workplace contributes to positive relationships, since there is little empirical evidence to support this claim (Feyerham & Rice, 2002; Zeidner et al., 2004).

Although there is a plethora of research on emotional intelligence, present day research is primarily predicated on two specific types of models, the pure emotional cognitive abilities model and the mixed model based on non-cognitive abilities, social skills, and competencies (Matthews et al., 2004). It is suggested that deeper investigation should examine “competencies more dependent on learning and socialization” (Matthews et al., 2003, p. 113). More attention regarding competencies
for learning and socialization should glean richer research. A multi-level theoretical approach would be helpful (Ashkanasy, 2002). This would expand the breadth and depths of scholarly inquiry, since present theories and models need additional refinement, because many factors may comprise emotional intelligence which present day models and theoretical constructs do not encompass (Ashkanasy, 2002; Matthews et al., 2003).

For example, Mayer, Salovey, and Caruso (1990) use the pure, cognitive, ability model, whereas Bar-On’s (2005) mixed model discusses testing non-cognitive abilities to address emotional-social intelligence. Goleman (1998), on the other hand, proposes that competencies are basic elements in emotional intelligence. Goleman (1995) who took the term, emotional intelligence, originally introduced by Salovey and Mayer (1990) and popularized the term, provided a new conceptual model for behavior in managing one's own emotions and managing emotions in general for relationships with others. However, Goleman's (1995) competency model to date lacks empirical data to show validity for the construct referred to as emotional intelligence (MacCann et al., 2003). Furthermore, Goleman has been unable to offer supporting empirical data for the causal links between emotional intelligence and the positive effects of this abstract concept (MacCann, et al., 2003; Matthews et al., 2004). And, yet what Goleman maintains about emotional intelligence and workplace performance makes practical sense to a layman. Intelligence at best is a mosaic of various components (Sternberg, 1997). With regard to..."the study of human abilities, it is probably overly idealistic to expect to fit confirmatory models to data that well represent the complexities of human cognitive functioning: too much is unknown"
(Horn, 1989, p. 39), and emotional intelligence is presently being challenged (Pfeiffer, 2001). It is evident that much future research is therefore needed.

**Research Question**

1. Is there a significant relationship between emotional intelligence represented by the MSCEIT© and the EQ-i™, demographic profiles, and workplace performance?

**Research Hypotheses**

**H1.** Emotional intelligence (MSCEIT©) (perceiving emotions, facilitating thought, understanding emotions, and managing emotions) are significant explanatory variables of individual workplace performance.

**H2.** Emotional intelligence quotient (EQ-i™) (intrapersonal, interpersonal, adaptability, stress management, and general mood) are significant explanatory variables of individual workplace performance.

**H3.** The EQ-i™ has significantly greater explanatory power of individual workplace performance than the MSCEIT© for individuals.

**H4.** Demographic profiles and emotional intelligence (perceiving emotions, facilitating thought, understanding emotions, and managing emotions) are significant explanatory variables of individual workplace performance.

**H5.** Demographic profiles and emotional intelligence (intrapersonal, interpersonal, adaptability, stress management, and general mood) are significant explanatory variables of individual workplace performance.

Based on the research, to date, there have been no studies comparing whether the full scales used to measure EI, using the EQ-i™ or the MSCEIT© test the same...
things or different things (Brackett & Mayer, 2003). It appears a great many variables may contribute to emotional intelligence making it valuable to do a wider variety of tests (Feyerham & Rice, 2002; Matthews et al., 2004). Since it would be prudent to further assess the psychometrics being presently used to measure EI (Brackett & Mayer, 2003; Matthews et al., 2004) a hypothesized model is developed to examine the relationships between emotional intelligence and individual workplace performance for the purpose of this research study.
Figure 2-1. Hypothesized model about EI, ESI, characteristics, and individual workplace performance.
Critical analyses of theoretical and empirical literature indicate there is a gap in the literature. There is a paucity of scholarly research for EI as an intelligence that can stand alone (Zeidner et al., 2004). It is imperative for empirical studies to show how emotional intelligence supports theoretical concepts, as well as use more objective research methods, because empirical research supporting emotional intelligence as a direct causal link to workplace performance is scant in this field (Feyerham & Rice, 2002; Matthews et al., 2004). However, the in-depth review of the literature for the purpose of this study, provided guidance to generate a theoretical framework and hypotheses to build upon the existing literature: to test propositions and expand on the current theories, models, and concepts. Chapter III discusses the non-experimental, quantitative, correlational (explanatory) and causal-comparative (exploratory) research methodology regarding relationships between emotional intelligence and individual workplace performance.
CHAPTER III
METHODOLOGY

Chapter III developed the research methodology, answered the research question, and examined the hypotheses generated to examine relationships between emotional intelligence and individual workplace performance. This chapter has been comprised of six primary sections: the research design, population, sampling plan (setting), instrumentation, procedures, and data analyses, concluding with a summary of the evaluation methods used in this research study.

Research Design

A non-experimental, quantitative, correlational (explanatory) and causal-comparative (exploratory) research design was utilized to explain the relationships between emotional intelligence and individual workplace performance. Through initial email invitations to determine how many respondents would participate (emailed to potential participants through the Coordinator of Research in the Office of Institutional Research, Planning, and Assessment for purposes of confidentiality) and survey packet mailings (initially through the university inter-office mail system and subsequently returned to the researcher via the United States Postal Service for completed survey packets), the data was collected from administrative and office staff employees at a private South Florida university. Additional number coded data (to protect the participants) for workplace performance reviews (highly confidential data) completed by university managers was provided by the university’s Executive Director of Human Resources to the coordinator of research to be subsequently obtained by the researcher for the study.
The study was comprised of four parts (See Appendices C, D, and E). Part 1 was the *Demographic Profile*, a self-report survey for objective indicators developed by the researcher. This included four variables: age, gender, highest level of educational attainment, and job role (administrative, middle administration, and employee office staff) (Research Question and Hypotheses 4 and 5). Part 2 was the MSCEIT© developed by Mayer, Salovey, and Caruso (2002) (Hypotheses 1, 3, and 4). Part 3 was the EQ-i™ developed by Bar-On (1997) (Hypothesis 2, 3, and 5). Part 4 addressed comparing the explanatory power between EI and ESI using the MSCEIT© and the EQ-i™ to explain which of the two surveys better explained emotional intelligence, as well as explored the Performance Review Scale© (and existing data) for individual workplace performance and attempted to compare the scale with the MSCEIT© and the EQ-i™ (Hypotheses 1, 2, and 3).

The hypotheses were tested and the research question was to be answered using regression analyses to examine the explanatory relationships between emotional intelligence and individual workplace performance. Factor analyses (to establish construct validity) and coefficient alphas (reliability of indices) were conducted on the MSCEIT© and the EQ-i™.

**Population and Sampling Plan**

**Target Population**

The target population in this research study included administrative and office staff employees (in all departments) from a private, South Florida university. The participants (272 administrative and office staff employees university-wide) were invited through an interoffice mailing. These invitations were be emailed to the
university employees from the office of Institutional Research, Planning, and Assessment (for anonymity) of the university. A return response for those who wished to participate was emailed to the office of Institutional Research, Planning, and Assessment, for coordinator of research for this department to number code the Performance Review Scales© the coordinator obtained from the Human Resource Director (for confidentiality). Once it was determined how many MSCEIT© and EQ-i™ survey instruments were needed, the instruments were ordered through Multi-Health Systems, Inc. When the researcher obtained the two instruments, the instruments were number coded by the coordinator of research to correspond with the number codes of the Performance Review Scales©. Subsequently, the survey instruments were then interoffice mailed to those employees named on the envelopes for each department with an enclosed return envelope; however, the return envelope only indicated the same number code for the two survey instruments to correspond with the Performance Review Scale© and demographic survey which were then mailed to the researcher in the addressed envelope provided for this purpose. Once the MSCEIT©, EQ-i™, and demographic surveys were received by the researcher, the MSCEIT© and the EQ-i™ were Federal Expressed to Multi Health Systems, Inc. for scoring. After the two survey instruments were scored and the raw data was returned to the researcher in an Excel spreadsheet, the researcher requested the coordinator for research to obtain the scores for the Performance Review Scales © from human resources which were coded to correspond with the codes for the MSCEIT©, the EQ-i™, and demographic surveys to the researcher. This complicated process provided confidentiality of survey completion for the participants in the study. Additionally, it
is important to note that this population was targeted due to emerging literature regarding the possible decline in workplace performance and employee retention for administrators and office staff employees of higher education, namely colleges and universities (Johnsrud, 2002).

**Accessible Population**

The entire full-time population of university administrators and office staff employees was accessible and invited to participate in the research study.

**Setting**

Data collection ultimately focused on the full-time administrators and office staff employees in a private south Florida university which included 272 full-time office employees. These participants were asked to complete two main survey instruments (MSCEIT© and EQ-i™) and the demographic survey instrument designed by the researcher.

**Sampling Plan**

The target population, full-time administrators and office staff employees of a private university in South Florida were invited to participate. The sample was considered to be a voluntary non-random sample. The sample was classified into three groups: upper level employees, middle level employees, and lower level employees. Upper level employees were non-academic executives for the university (i.e. vice presidents and executive directors). Middle level employees were considered “midlevel non-academic employees” classified as: “directors, managers, coordinators, advisors, counselors, technical and other specialists” (Johnsrud, Heck, & Rosser, 2000, p. 44). Lower level employees were typically non-academic, clerical, employee,
staff members (i.e. secretaries, administrative assistants, receptionists, and all other clerical workers). The final data produced was predicated on a self-selected sample of the participants wishing to participate in the research study.

**Sample Size**

For quantitative research studies, the larger the sample size, the lower the sampling error, which provides higher generalizability (Creswell, 2005). However based on a research study conducted by Feist and Barron (1996), who tested 80 respondents for emotional intelligence and academic intelligence, for the purpose of examining predictor and outcome variables, the minimum effective sample size for this research study may be comprised of as few as 80 participants (Feist and Barron, 1996). Although varying dimensions, variables, and characteristics may differ at other institutions of higher learning (Johnsrud, 2002), this research study was conducted to provide a framework, as stepping stone for future studies.

**Eligibility Criteria and Exclusion Criteria**

**Eligibility Criteria**

1. Administrators and the employee office (clerical) staff of Lynn University agreed to participate in this study and who completed both survey instruments.

2. Employees had to be 18 years of age or older.

3. Employees had to be full-time.

4. All employees had to be employed by Lynn University as either an administrator or employee staff.

**Exclusion Criteria**

1. Any employee who was not part of the administration or office (clerical) staff.
2. Participants who had minimal knowledge of the English language and who may have had difficulty completing the surveys.

3. Any new employees whose managers did not complete the Performance Review Scale© when Lynn University administered the survey questionnaire.

4. Any employee who did not return the surveys within the two week time frame given to complete the surveys.

5. Any incomplete surveys returned within the two week time frame.

Instrumentation

The study utilized four different measurement instruments. The first instrument consisted of the demographic profile designed by the researcher; the second instrument was comprised of the MSCEIT© developed by Mayer, Salovey, and Caruso (2002); and, the third instrument included the EQ-i™ developed by Bar-On (1997). The fourth instrument included existing data obtained by the human resource department of the organization in this research study (conducted by department managers) which utilized the Performance Review Scale© developed by Administaff (2006) to examine individual workplace performance by domain experts in this field. The highly confidential workplace performance scores were furnished to the Coordinator of Researcher and Development at the university from the Director of the Department of Human Resources, who subsequently furnished this information to this researcher.

Instrument 1: Demographic Profile

The Demographic Profile was the self-report survey for objective indicators developed by the researcher. This included four variables for age, gender, highest level of educational attainment, and job role (administrative, middle administration, and
employee office staff) to answer the Research Question and Hypothesis 4 and 5 used to collect this initial data from those who wished to participate in the study. Those who wished to participate in the study responded as such to the email invitation which was emailed directly to the coordinator of research, who had emailed the invitation to the sample population.

The profile was developed by the researcher consisting of fours specific items: age, gender, highest educational attainment, and administration, mid-level administration or office staff employee (job title was optional, not necessary). To report gender a dichotomous checklist reported this information. To further differentiate employees, a three-level checklist was used to indicate: administration, middle-level administration, and office staff employees. A five-level checklist reported educational attainment: high school, associates’ degree, bachelor’s degree, master’s degree, and doctorate degree, respectively. Age was grouped into a three-level checklist (provided there were enough respondents participating to do so): 18-30 years of age, 31-50 years of age, and 51 years of age and over. Table 1-3 below indicates how participants were to be divided.

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale</th>
<th>Level of Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Dichotomous checklist</td>
<td>Male, Female</td>
</tr>
<tr>
<td>Age</td>
<td>Fill in the blank</td>
<td>With actual years</td>
</tr>
<tr>
<td>Level of Education</td>
<td>Fill in the blank</td>
<td>With actual years</td>
</tr>
<tr>
<td>Job Title</td>
<td>Three-level checklist</td>
<td>Admin./Mid-Admin./Staff</td>
</tr>
</tbody>
</table>
Instrument 2: MSCEIT©

Emotional Intelligence Quotient (EIQ)

Description. EIQ was defined by Mayer, Salovey, and Caruso (2002) as comprised of four branches of pure cognition: perceiving emotions, regulating emotions, understanding emotions, and generating emotions to guide human behavior which can be determined utilizing the MSCEIT©. The four branches of the self-report MSCEIT© resulted in obtaining an emotional intelligence score. The four branch total score was referred to as the emotional intelligence quotient (EIQ) four branch EIQ score (Mayer et al., 2002). Each branch was comprised of two performance tasks. All four branches combined yielded a total of eight tasks to comprise the four branch EIQ score (Sections A through H). Branch one was a combination of Sections A and E. Branch two was a combination of Sections B and F. The third branch was a combination of Sections C and G. Finally, the fourth branch was a combination of Sections D and H. Additionally, the survey used both five-point rating scales and multiple choice response scales for tasks (depending on the task being completed). There were eight sections included in the MSCEIT© survey instrument (Sections A through H) which were completed by each of the 24 participants.

To further expand, the first two tasks to measured perception of emotions for branch one included pictures of facial expressions (Section A of the survey booklet) and landscapes and abstract art (Section E of the survey booklet) respectively. Task one assessed how an individual perceived the expression of faces in four separate pictures. Each of the 15 questions had five possible responses, based on a scale of one to five (1 being no emotion and 5 being extreme emotion) (Mayer, Salovey, & Caruso, 2002). Task
two had 18 questions with five possible answers for pictures of three landscapes and three abstract designs, each used to assess how much feeling was evoked by an individual for each of the six pictures, based on a scale from one to five (1 being happiness and 5 being disgust) (Mayer, Salovey, & Caruso, 2002). The scores for tasks one and tasks two were added together to obtain a total score for branch one in order to do a statistical analysis for this branch (EI variable) for the group of participants in the study, keeping in mind that the data for each of the specific (two) tasks within each branch respectively (and further discussed in more detail below) were combined to obtain all of the four total branch scores for the group of participants in order to obtain descriptive statistics.

The survey booklet for branch two used task three and four to evaluate how the individuals used emotions. In this branch, task three (sensation tasks) and task four (facilitation tasks) asked short questions (Mayer, Salovey, & Caruso, 2002). For task three (Section B of the survey booklet) there were only five questions with three responses for each question for a total of 15 answers. Task three (facilitation of thoughts) was designed for the purpose, as maintained by Mayer, Salovey, and Caruso (2002) with questions to evoke various kinds of moods individuals might use for problem solving regarding how one thinks and reasons during problem solving. The respondents answered the questions from the “mood” choices given in the survey regarding one’s mood in a particular situation (based on a scale of 1 being not useful to 5 being useful). Task four (Section F of the survey booklet) required the participant to answer questions that evoked different emotions compared with different sensations (e. g. color, temperature, and light). The purpose of these questions was to generate specific moods and induce individualistic reasoning (Mayer, Salovey, & Caruso, 2002). Five specific questions in
task three each required three separate responses to obtain a total of 15 separate answers. The answers were multiple adjectives which were based on a scale of one to five (1 being not alike and 5 being very much alike) (Mayer, Salovey, & Caruso, 2002). Tasks three and four were combined to comprise branch number two to do the descriptive statistics for the group of 24 participants in this study (See Table 4-2).

For branch three, task five (blends task) and task six (changes task) were used, to assess how individuals understand emotions (Mayer, Salovey, & Caruso, 2002). Task five (Section C of the survey booklet) assessed an individual’s ability to rate how an alternative emotion in a particular situation might help the individual attain specific results (Mayer, Salovey, & Caruso, 2002). The participant was asked to answer 20 questions in task seven. Each question required one answer out of five possible multiple choices given to determine how an alternate emotion might be more effective in a specified situation. Task six (Section G of the survey booklet) assessed the test-taker’s ability to connect specific emotions with certain situations by asking 12 fill-in the blank questions with one response for each question made from five multiple choices to fill in the blanks. To further elucidate, in this section of the survey an individual was given five fill-in the blank statements pertaining to what emotion(s) one connected his or her understanding with in a given situation (e. g. anger and disgust might have combined to result in contempt) (Mayer, Salovey, & Caruso, 2002).

The fourth branch entailed completing task seven (emotional management using alternatives) and task eight (managing emotions in social situations) (Mayer, Salovey, & Caruso, 2002). Task number seven (Section D of the survey booklet) tested an individual’s ability to evaluate the effectiveness of using a different action when others
were involved in a social interaction in order to achieve a specific outcome (Mayer, Salovey, & Caruso, 2002). Five scenarios in the survey instrument were given with four choice actions the participant had to respond to for each of these scenarios. Additionally, each of the four actions an individual needed to answer had five multiple choice responses. Task eight (Section H of the survey booklet) was used to measure an individual's ability to understand how emotions transition from one type of emotion one experiences into yet another type of emotion (e.g. emotions of anger becoming emotions of rage). Three short scenarios were given in this section, followed by three emotional responses required for each scenario. However, each of the three responses per scenario had five multiple choice answers for the test-taker to choose from (very ineffective to very effective). Regardless, there were nine answers in this section. Subsequently, once again, both task scores were combined to create a total branch score (for branch three) for the group of 24 participants included in the descriptive statistics.

**Reliability.** Coefficient alphas were conducted on the total scale and each subscale for the MSCEIT© (V.2) by Mayer et al. (2002). Test-retest reliability was conducted on a small sample size resulting in high full scale reliability, high for the two sub-areas, but lower branch score (subscale) reliability (Brackett & Mayer, 2001), indicating additional coefficient alphas for reliability testing may not have been necessary to examine to further establish construct validity.

**Validity.** Factor analyses have been conducted to establish construct validity (Mayer et al., 2003). Factor loadings for confirmatory analyses reported “the 4-factor model loads the two designated branch tasks on each of the 4 branches” (Mayer et al., 2003, p. 189). Therefore, additional factor analyses may not have needed to be conducted
to examine and further establish construct validity, despite the fact that factor analysis was performed by this researcher.

**Instrument 3: EQ-i™**

**Emotional-Social Intelligence (ESI)**

*Description.* Emotional-social intelligence was defined as a mix or combination of emotional and social intelligence for emotional expression and adaptability, comprised of competencies, skills, and facilitators which can be determined using the self-report EQ-i™ (Bar-On, 1997, 2004, 2005). The survey was made up of five composite scales (intrapersonal, interpersonal, adaptability, stress management, and general mood) with 15 subscales, scored on a five-point Likert-type rating scale for all of the responses to assess how one feels, thinks, or acts in “most” situations the majority of the time (1=very seldom or not true of me to 5=very often true of me or true of me) (Bar-On, 2004).

Composite scale one (intrapersonal) was comprised of four subscales to test: self regard (self-esteem), emotional self-awareness (understanding feelings), independence (autonomy), and self-actualization (individual potential); composite scale two (interpersonal) had only two subscales which were social responsibility (social constructivism) and interpersonal relationships (ability and capacity for maintaining satisfying relationships); composite scale three had three subscales to evaluate three areas of emotional intelligence which included reality testing (experience vs. reality), flexibility (ability to adjust emotions), and problem solving (generate effective solutions); composite scale four assessed stress management using two subscales, stress tolerance (ability to withstand stressful situations) and impulse control (ability to delay
temptations); and, composite scale five (general mood) was comprised of two subscales, happiness (ability to genuinely derive pleasure) and optimism (ability to be positive).

To further elucidate, according to Bar-On (2004) the five composite scales were designed to include the following: composite scale one (intrapersonal) was comprised of four subscales to test: self regard (self-esteem), emotional self-awareness (understanding feelings), independence (autonomy), and self-actualization (individual potential); composite scale two (interpersonal) had only two subscales: social responsibility (social constructivism) and interpersonal relationships (ability and capacity for maintaining satisfying relationships); composite scale three had three subscales to evaluate three areas of emotional intelligence: reality testing (experience vs. reality), flexibility (ability to adjust emotions), and problem solving (generate effective solutions); composite scale four assessed stress management using two subscales: stress tolerance (ability to withstand stressful situations) and impulse control (ability to delay temptations); and, composite scale five (general mood) was comprised of two subscales: happiness (ability to genuinely derive pleasure) and optimism (ability to be optimistic/positive). This will be discussed in more detail in Chapter 4.

**Reliability.** Cronbach’s alpha coefficients resulted as high on all the subscales, with an overall internal average consistency (Bar-On, 2002). However, additional coefficient alphas were conducted on the total EQ-i™ (EQ) and each subscale to further estimate and establish reliability.

**Validity.** To establish construct validity, Bar-On (1997) conducted a 13-factor varimax for 13 of the 15 subscales comprising the EQ-i™ with results ranging from .43 to .74. Additionally, Bar-On (1997) conducted secondary confirmatory analysis on the 5-
composite scale for intrapersonal, interpersonal, adaptability, stress management, and general mood, indicating the following results: intrapersonal .902, interpersonal .837, adaptability .951, stress management .832, and general mood .646, which further established construct validity regarding the emotional quotient (EQ). Furthermore, a study conducted by Dawda and Hart (2000) demonstrated the EQ-i™ had no gender bias. Overall, the EQ-i™ has been tested for “content, face, construct, divergent, criterion-group, discriminant, and predictive validity” establishing validity of the instrument (Bar-On, 2002, p. 89). Therefore, additional factor analyses may not have needed to be conducted to examine and further establish construct validity, despite the fact that factor analysis was performed by this researcher.

Instrument 4: Performance Review Scale©

Individual Workplace Performance

Description. The Performance Review Scale© was initially designed and offered in April, 2004, and created by a combination of various domain experts in the field of performance management, which is currently being used by over 75 thousand customers to review employee performance, including five to seven percent of the customers in education (Administaff, Inc., 2006). The Performance Review Scale© has been considered as a core survey tool comprised of competencies based on expert judgment in the field of human resource management, and as defined by Administaff, Inc. (2006) has been accepted as a way to standardize performance reviews relevant to the job category based on the reviewer’s choices as a business tool. For this study twelve competencies were scored using a five-point Likert scale with five as the highest score: (i.e. 5-outstanding performance, 4-exceeds requirements, 3-meets requirements, 2-needs
improvement, and 1-unsatisfactory) (Administaff, 2006). The twelve competencies were as follows: job knowledge, quantity, quality, dependability, cooperation, initiative, problem solving, judgment, planning and organization, attendance and punctuality, written communication, and oral communication. The instrument has been claimed to be differentiated from other survey instruments by rating specified competencies pertinent to the organization, rather than rating specific duties and responsibilities (Administaff, Inc., 2006). Additionally, this is not a self-report measure, but rather an assessment tool used by managers (reviewers) of various departments in organizations to rate the employees who work in respective departments. The survey instrument is currently being used by the university in this study. Furthermore, the instrument has shown high levels of customer satisfaction due to recent surveys conducted by Administaff, Inc. (2006). Additionally, this researcher is not permitted to do any additional testing of the instrument for construct validity as per Administaff, Inc. (2006).

Procedures: Ethical Considerations and Data Collection Method

This section is a detailed description of the ethical considerations regarding the protection of human subjects, as well as other considerations, and data collection methods for the research study.

1. Permission to use the two survey questionnaires from Multi-Health Systems, Inc. for this research study was obtained, as well as permission to use the instruments for publication in the dissertation prior to the proposal defense (See Appendix D). Permission was be obtained from Administaff, Inc. prior to the proposal defense for purposes of discussing the Performance Review Scale© in the dissertation, as well as for publication; however, the instrument
was not administered, because it already had been administered by Lynn University employees (See Appendix E). A permission letter was needed from Multi-Health Systems, Inc. to indicate this researcher is being guided by a dissertation committee and a member of the psychology department for the research to commence, as per Multi-Health Systems, Inc. The letter included the researcher’s request to use the instruments for dissertation purposes and included the name Dr. Robert Riedel of Lynn University’s Psychology Department and Chair of this researcher’s dissertation committee, as per Multi-Health Systems, Inc. guidelines (See Appendix D) prior to the proposal defense. Once IRB approval was obtained the surveys were ordered (MSCEIT© and EQ-i™) and the researcher hand delivered them to Mr. Karlton Brown (Coordinator for the Office of Research, Planning, and Assessment).

2. The researcher obtained permission from Lynn University to conduct the study at the university prior to the proposal defense (See Appendix H).

3. An application form was submitted to the Institutional Review Board (IRB) of Lynn University. An IRB request was made to waive documentation of a signed consent.

4. Permission to conduct the research and receive Performance Review© scores (discussed below) was obtained from the Vice President of Finance and Business of Lynn University, Ms. Laurie Levine and the Human Resource (HR) Department of Lynn University from the Executive HR Director of HR, Dr. Robert Blizinski (See Appendix B, C), as well as permission from
Administaff, Inc. (discussed above) for the Performance Review for publication purposes, because there is already existing data (discussed in detail below) for the organization being researched (See Appendix E).

5. After IRB approval was obtained by the researcher, an e-mail invitation was created by the researcher and emailed by Mr. Karlton Brown (Office of Research, Planning, and Assessment) to invite Lynn University administrators and employee staff (See Appendix F).

6. Those who were interested in participating contacted Mr. Karlton Brown (Office of Research, Planning, and Assessment). Those who indicated interest were assigned a random (number) code Identification Number (ID), which was not associated with any identifiers of participant. The ID codes were kept confidential. Those interested in participating were notified by Mr. Karlton Brown that they will receive an authorization for voluntary consent, surveys that will have a random number code, and a hard copy invitation (created by the researcher) (See Appendix F).

7. Surveys were coded with this ID number (and no name or other identifiers of participants) were present.

8. The Authorization for Voluntary Consent, a hard copy invitation, and surveys was sent (by inter-office mail) "by Mr. Karlton Brown" to each staff member that expressed interest in participating in the study. A self-addressed, stamped envelope was included with the name and address of the researcher. (The surveys were be kept in a securely locked cabinet when they were returned to the researcher.)
9. Employees completed the surveys and mailed them directly to the researcher in the self-addressed, stamped envelope. Therefore, Mr. Karlton Brown and members of the Human Resource Department never saw surveys completed by staff.

10. Upon return of completed surveys to the researcher, the researcher contacted Mr. Karlton Brown to notify him of staff IDs required only for surveys that have been completed by staff.

11. Mr. Karlton Brown requested performance scores from Dr. Robert Blizinski, Executive Director of the Human Resource Department and obtained only those employee performance ratings included in the study (Quantitative Data Only). Subsequently, Dr. Blizinski furnished Mr. Brown with the Performance Review© scores (used by Lynn University in 2006) with the employee performance ratings of only those participants included in the study.

12. Using the code IDs assigned to participants, Mr. Karlton Brown then recorded the quantitative ratings of the employee Performance Reviews© into an excel file, and sent the file to the researcher. This was emailed in one data file organized by ID and Performance Review© categories with the ratings. Only total quantitative ratings were included. Once received by the researcher, all data was kept in a securely locked cabinet.

13. At no time did Mr. Karlton Brown see the survey(s), responses, or any raw data submitted by participants. Only a final dissertation report may be reviewed of "grouped" responses.
14. At no time did Dr. Robert Blizinski see the survey(s), responses or any raw data submitted by participants. Only a final dissertation report may be reviewed of “grouped” responses.

15. The identity of employees participating in the study was anonymous to the researcher.

16. The “honor system” was used and participants timed themselves for each of the two emotional intelligence surveys completed (30 minutes for each survey). No more than 45 minutes for the MSCEIT©, and no more than 40 minutes for the EQ-i™ was allotted by the participants for survey completion. Only one minute or so was needed to complete the demographic survey.

17. Once this researcher received all the completed survey instruments, this researcher recoded the surveys with new ID number codes, for confidential purposes and the protection of the participants.

18. The code numbers protected all participants at all times, and continue to remain anonymous at all times, including after the study is completed.

19. The surveys were then to be mailed to Multi-Health Systems, Inc.’s scoring department, located at 3770 Victoria Park Avenue, Toronto, ON M2H 3M6 (CANADA) to be scored using express/insured postal service.

20. Once scored by Multi-Health Systems, Inc. the raw scores were returned to this researcher by email in a separate spread sheet for each of the two survey instruments and entered into the SPSS program along with the demographic survey information and the performance ratings for analysis.

21. A password-protected database was created by this researcher.
22. Once the data analysis process was completed, data was confidentially and electronically saved (password protected identification was required).

23. All findings were to be reported for the three specific groups: administrators, mid-level administration, and employee staff, (as well as for sub-groups, if applicable).

24. Written authorization was given to the researcher by the copyright/trademark holders of the instruments to use the instruments for analysis only as proposed in the study, and no initial evaluations for analyses by the copyright holders were requested or given.

25. Upon request, the researcher furnished the copyright/trademark holders with all findings once the dissertation was completed (a mailed copy of the complete dissertation), and noted in the text of the research (as per copyright/trademark holders) that replication of the survey instruments was prohibited. The research instruments were only used to collect and analyze data.

26. Under no circumstances were the MSCEIT™, EQ-i©, or the Performance Review© to be duplicated for the purpose of this study. (These instruments have copyright/trademark laws which prohibited replication of any kind for: the MSCEIT©, EQ-i™ and Performance Review Scale©).

27. One month after data collection, Form 8 (Termination of Project) was submitted to the IRB.
28. All of the data shall be maintained for one year and will be destroyed after five years.

Methods of Data Analysis

The study utilized the latest versions of the Statistical Package for Social Sciences (SPSS), versions 15 and 16 to respond to the research question and the hypotheses indicated above. All data collected from the target population was analyzed using SPSS. Prior to data analyses all data was coded. To provide for psychometric analyses, Cronbach’s coefficient alphas and reliability to establish internal consistency were be used. Factor analysis provided construct validity for the EQ-i™ and the MSCEIT©. The research question was answered using descriptive statistics to introduce a description of the sample. To describe demographic characteristics, work profiles, and all other variables including the quasi-independent variable (EI) and dependent variable (individual workplace performance) of administrators and office staff employee, measures of central tendency, frequency distributions, and variability were used.

The hypothesis testing used inferential statistics. Hypothesis 1 and hypothesis 2 were tested using multiple regression analyses to determine the explanatory relationship(s) between emotional intelligence and individual workplace performance. Hypotheses 1 and Hypothesis 2 were tested to determine the explanatory relationship between emotional intelligence and individual workplace performance. (Cronk, 2005; Pagnano, 2006; Tukey, 1977). The MSCEIT© was used to test H1 and the EQ-i™ was used to test H2. This analysis method was used to make predictions for correlations (Anderson, 2004; Creswell, 2005), and helped the researcher understand “how the predictors interrelate” (Anderson, 2004, p. 114). Therefore, the regression equation was
useful to identify correlations, associations, and relationships (Creswell, 2005; Cronk, 2004; Tukey, 1977; Vogt, 2005) to determine variables that were related to members of groups, and for this study “understand how various predictors lead to performance results” (Anderson, 2004, p. 114). For example a multiple regression equation may take many forms, such as the following simplistic equations for hypotheses one and two.

Hypotheses 1 and 4:

\[
Y \text{ (predicted) } = b(X) + a \quad (\text{Creswell, 2005})
\]

\[Y = \text{(predicted) individual workplace performance (dependent/outcome variable) \]}

\[b = \text{regression coefficient (beta weights represent predictive power of independent variables)} \]

\[x = \text{emotional intelligence “MSCEIT®” (independent variable)} \]

\[a = \text{“the intercept or a constant, the value of the predicted y” (individual workplace performance) “when } x = 0” \quad (\text{Creswell, 2005, p. 336}). \]

Hypotheses 2 and 5:

\[
Y \text{ (predicted) } = b(X) + a \quad (\text{Creswell, 2005})
\]

\[Y = \text{(predicted) individual workplace performance (dependent/outcome variable) \]}

\[b = \text{regression coefficient (beta weights represent predictive power of independent variables)} \]

\[X = \text{emotional intelligence “EQ-i™” (independent variable)} \]

\[a = \text{“the intercept or a constant, the value of the predicted y” (individual workplace performance) “when } x = 0” \quad (\text{Creswell, 2005, p. 336}). \]

In order to determine significant levels of variance, \( r^2 \) is utilized by comparing beta weights. (\( R^2 \) is defined as the percentage or fraction of variance for a dependent
variable which can be explained by the independent variable) (Cohen, 1992a; Cohen, 1992b; Cohen, 1998; Creswell, 2005; Garson, 2002; Howell, 2006; Pagano, 2006; Tukey, 1977. The primary objective is to determine degrees of association (magnitude), (Anderson, 2004; Creswell, 2005; Garson, 2002), and “see how the various predictors combine and interact to predict scores on a criterion variable” (Anderson, 2004, p. 114).

Hypothesis 3 did not require statistical testing, but rather tried to compare the adjusted R² results from H1 versus H1. For H4 and H5 multiple regression analysis was conducted in order to see how they correlated, complimented, or paralleled with demographic profiles and individual workplace performance regarding emotional intelligence.

The Performance Review Scale© was the representative measure of individual workplace performance. (However, it is prudent for the researcher to state that the Performance Review Scale© has never been used before in any other study prior to this complex study in order to correlate emotional intelligence with the either the MSCEIT© or the EQ-i™ to examine emotional intelligence and individual workplace performance.) The university utilized the Performance Review Scale© developed by Administaff, Inc. (2004) to measure an individual employee’s workplace performance. Due to the agreement made with the lead legal counsel at Administaff, Inc., (in order to obtain permission to conduct the study, as well as the agreement made with the Human Resource Department for the employees in the study, only the existing total scores for each of the employees participating in this research were permitted to be utilized). Only the total scores for the performance Review Scale© was provided by the university. Therefore, for the Performance Review Scale™, Cronbach’s alphas could not be used to
determine whether there was a strong, internal consistency for the scale, even though this is the most common way to estimate internal consistency for items incorporated in scales (Bryman & Cramer, 1995; Garson, 2002). Technically speaking, alphas are calculated for each of the scale items as well as the entire scale, and significant alpha scores are at least .70 and above (Bryman & Cramer, 1995). This is not a statistical test, but rather an indicator of an instrument’s reliability (Bryman & Cramer, 1995; Garson, 2002) which will be further discussed in the subsequent chapters.

**Evaluation of Research Methods**

This section discusses the internal and external validity to elucidate the strengths and weaknesses of the research design. Internal validity refers to the relationship(s) between the independent and dependent variable(s), whereas external validity refers to the inferences, propositions, and conclusions for the purpose of generalizing (Cohen, 1999; Creswell, 2005; Howell, 2006; Pagnano, 2006).

Internal Validity: Strengths

1. This non-experimental, quantitative, correlation (explanatory) and comparative research design had more strength to explain findings than descriptive or exploratory research designs.

2. The survey instruments (MSCEIT© and EQ-i™) appeared to demonstrate adequate reliability and validity.

3. The variables were quantifiable.

4. The methodology may be better than qualitative research.

5. The use of regression analyses strengthened the research design for explanatory/predictive relationships between causal and outcome variables.
6. The use of different data sources for data collection further enhanced the internal validity.

7. Due to the data analyses procedures utilized in the study, internal validity may have been increased/improved.

8. The research design made it possible to additionally examine the possibility of relationships.

Internal Validity: Weaknesses

1. The non-experimental research design was weaker than an experimental design and may have a lesser impact.

2. Non-experimental research designs are weaker from which to make causal inferences.

3. Using an instrument such as the Performance Review Scale© with no reliability or validity estimates may have threatened the internal validity of the study.

4. Researcher’s selection (bias) of the population may have weakened the findings.

5. The inability of doing Cronbach’s alphas to determine whether there was a strong, internal consistency for the Performance Review Scale© may have posed a threat for the internal validity of the study.

6. The inability to do factor analyses to examine the construct validity of the Performance Review Scale© may have posed a threat for the internal validity of the study.
External Validity: Strengths

1. The population was accessible.
2. Accessibility of the population could have yielded high return rates of the survey instruments.
3. Focus on one type of organization created homogeneity.

External Validity: Weaknesses

1. The researcher did not have full control of the sampling.
2. The voluntary sample of those who agreed to participate may have produced sample bias.
3. Correlational methods had a tendency to miss other important/underlying (extraneous) variables responsible for causality (other variables may contribute).
4. Caution was used for generalizability, because the research focus was on only one type of organization, which created homogeneity, and limited generalizing findings to other colleges and universities.
5. Generalizing findings to other organizations, populations, and settings was limited.

The research methodology was depicted in Chapter III. The chapter included and addressed the research question and the research hypotheses associated with emotional intelligence and individual workplace performance. Additionally discussed, were the proposed research design, the target population, sampling procedures, instrumentation for the research, data collection procedures, and data analyses, and concluded with an evaluation of the research study. Chapter IV discusses the research findings.
CHAPTER IV

Results

Chapter four has included an analysis of the data with results for the five hypotheses in this study. Subsequently, this chapter additionally attempted to answer the research question.

Introduction

The initial intent for the research design and methodology as discussed in Chapter 3 was doing multiple regression analyses. However, correlation analysis using simple linear regression (bivariate analysis) was chosen in lieu of the proposed multiple regression analyses because of the small sample size. Sample size requirements for establishing the nature of a relationship between two variables through correlation analyses were smaller than sample size requirements for establishing a valid model of prediction; using multiple regression analyses, given the sample size, was insufficient for the multiple regression analyses to be conducted as described in Chapter 3. Additionally, with many of the variables having been found not to be linearly related, as discovered through insignificant findings of correlation analyses, multiple regression analyses had been rendered unnecessary. Furthermore, in order to do regression analyses Tabachnick and Fidell (2005) maintained that 10 participants were usually necessary per variable being tested. This sample size only had 24 participants. Using multivariate statistics could not be conducted (Tabachnick & Fidell, 2005) because there were 16 quasi-independent (subject) variables. There was no way that the initially proposed multiple regression analyses (with 16 variables) could have produced valid statistical analyses with only an n of 24 as the original idea proposed. Therefore, as expressed above, due to the small
sample size, correlation analysis using simple linear correlations (bivariate analysis) was chosen instead of multiple regression analyses (Faul, Erdfeleder, Lang, & Buchner, 2007; Tabachnick & Fidell, 2005) as perhaps the more appropriate method of analysis for this research study given the data collected.

This study attempted to investigate the relationships between emotional intelligence and individual workplace performance. The research question and five hypotheses were formulated to examine emotional intelligence and individual workplace performance.

The study was conducted as a non-experimental, quantitative, correlational (explanatory) and causal-comparative (exploratory) research design to explain the relationship between emotional intelligence (quasi-independent variable) and individual workplace performance (dependent variable). The results of this study attempted to answer the research question using four parts. Part 1 was the Demographic Profile, a self-report survey for objective indicators developed by the researcher. This included four variables: age, gender, highest level of educational attainment, and job role (administrative, middle administration, and employee office staff) (Research Question and Hypotheses 4 and 5). Part 2 was the Mayer-Salovey-Caruso-Emotional Intelligence Test (MSCEIT©) which was developed by Mayer, Salovey, and Caruso (2002) (Hypotheses 1, 3, and 4). Part 3 was the Emotional Quotient Inventory, (EQ-i™) developed by Bar-On (1997) (Hypothesis 2, 3, and 5) to examine emotional intelligence or more recently addressed by Bar-On as emotional-social intelligence. Part 4 addressed comparing the explanatory power between the emotional intelligence quotient (EIQ) and emotional-social intelligence (ESI) using the MSCEIT© and the EQ-i™ to explain
which of the two surveys indicated a relationships between emotional intelligence and workplace performance (Hypotheses 1, 2, and 3).

In addition to attempting to compare the MSCEIT© and the EQ-i™, and subsequently answer the research question both surveys were to be compared to the Performance Review Scale© (using the current existing data of the university in this study for total workplace performance scores) for individual workplace performance. The Performance Review Scale© was the representative measure of the dependent variable, individual workplace performance for the purpose of this study. Next, demographics were also compared to workplace performance.

A total of 272 full-time office employees (77 executive administrators, 151 mid-level administrators, and 44 clerical office staff) were invited to participate via an email invitation which was sent through the university’s Office of Research, Planning, and Assessment by the coordinator of this department. Employees were asked to respond to the email by simply answering: yes or no. Of the 272 full-time office employees, only 43 full-time office employees (15.8%) responded yes to the email for participation in the study. Once it was determined only 43 survey packets were necessary, the coordinator of the university’s Office of Research, Planning, and Assessment was furnished with survey packets by the researcher to number code all surveys and demographic profiles and subsequently mail through inter-office university service. The packets included return, addressed, and stamped envelopes for the researcher to obtain via regular postal mail services. However, of the 43 participants, only 24 participants returned the completed survey packets during a process conducted over a five month time span. Therefore, the actual sample of participants for this study consisted of only
24 university employees. The overall response rate for this study was only 15.8% and was not as high as this researcher would have liked, given the target sample of 272 employees. This was considered to be a fairly low response rate (Nunnally & Bernstein, 1994). Despite this low response rate, it was deemed the research study could be continued as a pilot study.

The MSCEIT® and EQ-i™ were then mailed to Multi-Health Systems, Inc. scoring department, which were scored and emailed back to the researcher in two separate Excel files for each of the two surveys. Once the Excel files were emailed to the researcher, the researcher emailed the coordinator for the Performance Review Scale© scores, who furnished the total (sum of) scale scores with number codes corresponding to the demographic profile and two surveys. The researcher collected all pertinent data and performed data analyses utilizing the SPSS statistical package 15.0 and 16.0 to report the results.

First, the results of descriptive analysis that described the sample for the study were addressed. Second, for each of the hypothesis, bivariate correlations between the variables were examined using Pearson’s correlation coefficient and simple linear regression analyses which were used to assess the relationships between the quasi-independent variables (for emotional intelligence) and the dependent variable (workplace performance). Additionally, a chi-square analysis was conducted to determine if workplace performance was related to the emotional intelligence quotient as measured by the EQ-i™. Next, statistical analyses were conducted on demographic variables and workplace performance. Lastly, the implications of these results attempted to answer the research question, concluding with a summary for the chapter.
Demographic Characteristics of the Sample

All the demographics for age, gender, work level, and education can be seen in Table 4-1. There were 24 participants between the ages of 27 through 72 with an average age of 43.5. The participants (n=24) were divided into age groups as follows: 18-30 years of age (n=4), 31-50 years of age (n=13), and 51 and above (n=7). Seventeen (70.8%) of the respondents were females and seven (29.2%) were males. The following three job levels were used in the study: office staff (n=7) 29.2%, mid.-level admin. (n=8) 33.3%, and administration (n=9) 37.5%. There were six levels of education used in the study: high school (n=1) 4.2%, some college (n=3) 12.5%, associate’s degree (n=1) 4.2%, bachelor’s degree (n=5) 20.8%, master’s degree (n=13) 54.2% and doctoral degree (n=1) 4.2%.
Table 4-1

*Frequencies for the demographic variables (n = 24)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-30 years</td>
<td>4</td>
<td>16.7</td>
</tr>
<tr>
<td>31-50 years</td>
<td>13</td>
<td>54.1</td>
</tr>
<tr>
<td>51 &amp; above</td>
<td>7</td>
<td>29.2</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>17</td>
<td>70.8</td>
</tr>
<tr>
<td>Male</td>
<td>7</td>
<td>29.2</td>
</tr>
<tr>
<td><strong>Work Level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administration</td>
<td>9</td>
<td>37.5</td>
</tr>
<tr>
<td>Mid-level Admin</td>
<td>8</td>
<td>33.3</td>
</tr>
<tr>
<td>Office Staff</td>
<td>7</td>
<td>29.2</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School</td>
<td>1</td>
<td>4.2</td>
</tr>
<tr>
<td>Some College</td>
<td>3</td>
<td>12.5</td>
</tr>
<tr>
<td>Associates Degree</td>
<td>1</td>
<td>4.2</td>
</tr>
<tr>
<td>Bachelors Degree</td>
<td>5</td>
<td>20.8</td>
</tr>
<tr>
<td>Masters Degree</td>
<td>13</td>
<td>54.1</td>
</tr>
<tr>
<td>Doctoral Degree</td>
<td>1</td>
<td>4.2</td>
</tr>
</tbody>
</table>
The scores for the dependent variable, individual workplace performance were obtained from existing data collected by the Human Resource Department for the university employees, who used the Performance Review Scale© as the representative measure of individual workplace performance (dependent variable) for this study. (However, it is prudent for the researcher to reiterate that the Performance Review Scale© has never been used before in any other study prior to this complex study in order to correlate emotional intelligence with the either the MSCEIT© or the EQ-i™ to examine emotional intelligence and individual workplace performance.) The university utilized the Performance Review Scale© developed by Administaff, Inc. (2004) to measure an individual employee’s workplace performance. However, due to the agreement made with the lead legal counsel at Administaff, Inc., in order to obtain permission to conduct the study, as well as the agreement made with the Human Resource Department for the employees in the study, only the existing total scores for each of the employees participating in this research were permitted to be utilized. Furthermore, the researcher was additionally instructed by the Human Resource Department that only group scores could be reported, so that no human subject would be harmed by the reported data. Individual performance scores (total scores) were pre-coded for the individual participants in this study prior to the researcher receiving the total scores; and, were then re-coded by the researcher. Performance scores were conducted by department managers. The scores were based on a five point Likert scale as follows: 5-outstanding performance, 4-exceeds requirements, 3-meets requirements, 2-needs improvement, and 1-unsatisfactory. The workplace performance scores with the numeric values displaying the mean (3.74), median (3.65), mode (3.50), and the
standard deviation (.44) for the group (N=24) of participants were subsequently obtained utilizing the SPSS program as seen directly below in Table 4-2. Although the group of participants fell between the range, “meets the requirements,” due to the small sample size which was not representative of the 272 employees the scores obtained were rendered inadequate for the purpose of this study.

Table 4-2

Descriptive statistics for the dependent variable, workplace performance, and the quasi-independent variables from both the MSCEIT® (perceiving emotion, facilitating emotion, understanding emotion, and managing emotion) and the EQ-i® (total emotional quotient, intrapersonal, interpersonal, stress management, adaptability, and general mood).

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workplace Performance</td>
<td>24</td>
<td>3.74</td>
<td>3.65</td>
<td>3.50(^a)</td>
<td>.44</td>
</tr>
<tr>
<td>Perceiving Emotion</td>
<td>24</td>
<td>25.84</td>
<td>27.01</td>
<td>16.40</td>
<td>3.40</td>
</tr>
<tr>
<td>Facilitating Emotion</td>
<td>24</td>
<td>13.32</td>
<td>13.63</td>
<td>10.27</td>
<td>1.44</td>
</tr>
<tr>
<td>Understanding Emotion</td>
<td>24</td>
<td>17.90</td>
<td>17.94</td>
<td>17.90</td>
<td>0.92</td>
</tr>
<tr>
<td>Managing Emotion</td>
<td>24</td>
<td>12.36</td>
<td>12.71</td>
<td>8.91</td>
<td>1.30</td>
</tr>
<tr>
<td>Total Emotional Quotient</td>
<td>24</td>
<td>105.25</td>
<td>110.00</td>
<td>94.00(^a)</td>
<td>16.19</td>
</tr>
<tr>
<td>Intrapersonal</td>
<td>24</td>
<td>103.75</td>
<td>109.00</td>
<td>101.00(^a)</td>
<td>15.908</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>24</td>
<td>107.25</td>
<td>110.00</td>
<td>110.00(^a)</td>
<td>11.28</td>
</tr>
<tr>
<td>Stress Management</td>
<td>24</td>
<td>103.62</td>
<td>105.50</td>
<td>88.00(^a)</td>
<td>17.12</td>
</tr>
<tr>
<td>Adaptability</td>
<td>24</td>
<td>105.96</td>
<td>107.50</td>
<td>121.00</td>
<td>16.06</td>
</tr>
<tr>
<td>General Mood</td>
<td>24</td>
<td>103.83</td>
<td>112.00</td>
<td>112.00</td>
<td>16.16</td>
</tr>
</tbody>
</table>

\(^a\) Multiple modes exist. The smallest value is shown.
The quasi-independent variables examined in this study represented emotional intelligence as measured by the MSCEIT© and the EQ-i™, and it is of great importance to note that emotional intelligence was divided into numerous quasi-independent variables by the survey developers. The variables examined in this study included the independent variable (quasi-independent variable[s]) for emotional intelligence and the dependent variable for individual workplace performance. One survey instrument more formally known as the Mayer-Salovey Caruso-Emotional Intelligence- Test (MSCEIT©) was used to measure emotional intelligence and developed by Mayer, Salovey, and Caruso (2002) with four quasi-independent variables (also referred to as the MSCEIT© branches) to test emotional intelligence; whereas the second survey instrument used to measure emotional intelligence, more formally known as the Emotional Quotient Inventory (EQ-i™), which was developed by Bar-On (2004), used five quasi-independent variables (also referred to as either the five composite scales or five scales) to test emotional intelligence, representing different aspects of emotional intelligence. Additionally, the total emotional quotient score was included for this study, which was furnished in the Excel spread sheet this researcher obtained from Multi-Health Systems, Inc. Multi-Health Systems, Inc. computer generated all the scores for the emotional intelligence variables, but for the purpose of this study group scores were only reported for the group of respondents (See Table 4-2). The raw data scores for each survey (MSCEIT© and EQ-i™) scored by Multi-Health Systems, Inc. were included in Excel spread sheets for both survey instruments and were subsequently sent via email by Multi-Health Systems, Inc. to this researcher to conduct this study.
For the purpose of the reader, the researcher found it imperative to recap sections of prior chapters for the study regarding the MSCEIT© and the EQ-i™ before discussing the subsequent results, and to give more in depth information in order to describe how the descriptive statistics were obtained. To further elucidate, the MSCEIT© survey instrument was divided by the survey developers into four branches (quasi-independent variables) that represented different aspects of emotional intelligence, which included eight task scores (two tasks per branch) to measure an individual’s emotional intelligence, as follows: perceiving emotion, using emotion, understanding emotion, and managing emotion which has been discussed below in ascending order of importance (Mayer, Salovey, & Caruso, 2002) as can be seen above in Table 4-2. The choices ranged from very ineffective to very effective without any numeric value such as may be seen in most Likert-type scales. Once this researcher obtained all the branch scores (the combined task scores pertaining to each of the branches) SPSS was utilized to obtain descriptive statistics for the group of 24 participants in the study (See Table 4-2).

Each of the four branches of the MSCEIT© assessed different aspects of emotional intelligence (EI). Therefore, the following descriptive statistics (numeric values) the researcher obtained for each branch of this study have been subsequently discussed in more detail. Branch one (perceiving emotion) for the group of 24 participants (mean=25.84, median=27.01, mode =16.40, and standard deviation= 3.40) referred to perceiving emotions. This branch was regarded by the instrument developers as one’s ability to recognize emotions in one’s self, as well as emotions in others. Branch two (facilitating emotion) for the group of 24 participants (mean=13.32, median=13.63, mode=10.27, and standard deviation=1.44) referred to an individual’s use of emotions.
The research developers defined branch two as an individual’s ability to generate emotions through reasoning. Branch three (understanding emotion) for the group of 24 participants (mean=17.90, median=17.94, mode=17.90, and standard deviation=.92) referred to understanding one’s emotions. As per the research developers understanding one’s emotions included the ability to transitionally move from one emotion to another. Finally, the descriptive statistics for the group of 24 participants in branch four (managing emotion) (mean=12.36, median=12.71, mode=8.91, and standard deviation=1.30) referred to an individual’s ability to manage one’s emotions, as well as emotions in others. The numeric values for the mean, median, mode, and standard deviation of the branch scores of MSCEIT© that were needed to assess the emotional intelligence for the group of 24 participants (N=24) have been portrayed in Table 4-2.

It should be noted that first the raw scores for each task were computed to be assessed. To obtain the branch scores “the unadjusted raw score for a branch”...considered to be “the average of the two constituent unadjusted task scores” was conducted as proposed by the instrument developers (Mayer, et al., 2002, p. 67). The adjusted raw scores for each branch were then converted into percentiles, as can be seen in Table 4-2. As per the instrument developers, it is important to note, “MSCEIT© data are skewed, and the optimal way to standardize the scores is to use empirical percentiles” (Mayer, et al. 2002, p. 68). Since the data from the MSCEIT© is skewed, according to the instrument developers, the MSCEIT© cannot be converted easily to create standardized scores (Mayer et al., 2002). Empirical percentiles are obtained using empirical percentile tables for this purpose (as that used for IQ testing) and compared to the normative sample, which can be found in an empirical percentile table. Mayer,
Salovey, and Caruso (2002) contend using the same metric system used for other “ability-based intelligence tests” such as that utilized for testing intelligence to obtain the intelligence quotient (IQ) which has a mean score of 100 with 15 as the standard deviation. The sample size was too small to determine overall emotional intelligence percentile rates for full-time office employees at the university in this study. Furthermore, the responses for the MSCEIT© are “assigned a score based on the proportion of the consensus sample that selected” a particular response (Mayer et al., 2002, p 67). However, the sample size and the disparity in the range of responses in this study could not be assigned a response rate to adequately determine overall emotional intelligence for full-time office employees at the university, based on general consensus scoring for the group of 24 participants, rendering the results inadequate. For example, in general consensus scoring if the letter “a” had been selected for an item in the survey booklet and 75% (proportion = .75) of the general consensus had selected “a” then a score of .75 “would be assigned to that response.” Once again since the disparity of choices was large general consensus scoring could not be validated to determine emotional intelligence for full-time employees for the purpose of this study.

In order to expand on the EQ-i™, the five composite scales (quasi-independent variables) comprising the EQ-i™ were divided by the survey developer into five distinct composite scales used to measure one’s emotional intelligence which included: the intrapersonal emotional quotient, the interpersonal emotional quotient, the emotional quotient for adaptability, the emotional quotient for stress management, and the emotional quotient for an individual’s general mood (Bar-On, 2004).
The descriptive statistics in Table 4-2 included the five composite scales scores (quasi-independent variables) that were obtained for the group of 24 participants in this study. The five composite scales that comprised the EQ-i survey instrument measured different aspects of emotional intelligence of the participants (Bar-On, 2004). The total (overall) emotional intelligence scores (all the quasi-independent variables for the five composite scales) were provided (in an Excel spread sheet) to the researcher by the scoring company, Multi-Health Systems, Inc.

The five composite scales assessed specific aspects of emotional intelligence which Bar-On (2004) claimed were pertinent (quasi-independent) variables necessary to examine in determining an individual’s emotional intelligence. The five composite scales were: an individual’s intrapersonal emotional quotient, an individual’s interpersonal emotional quotient, an individual’s emotional quotient for adaptability, the emotional quotient for stress management, and the emotional quotient for an individual’s general mood (Bar-On, 2004). Once the individual scores were obtained the group scores for each composite scale was entered into the SPSS program. However, additionally, included in the Excel spread sheet was the total emotional quotient for the emotional intelligence for each individual participant in the study which were combined to obtain the total overall emotional intelligence score for the group. The purpose of extrapolating the overall scores from the computer generated raw data provided by Multi-Health Systems, Inc. was utilized to further examine the emotional intelligence of employee participants for the study which were subsequently entered into the SPSS program to obtain additional descriptive statistics. Furthermore, since the total scores for each individual were provided in the scoring sheet for this quasi-independent variable, it made
sense to the researcher to use this additional data to further analyze emotional intelligence for the 24 participants as a group, with the hope that statistically significant results might be revealed in addition to the group scores for the five composite scales described in more detail below, particularly since the sample size for the study was small (to be referred to later in the chapter and discussed in more detail in chapter 5).

According to Bar-On (2004) the five composite scales were designed to measure specific aspects of EI. The first composite scale measured an individual’s inner self (intrapersonal scale); the second composite scale measured an individual’s skills to interact with others (interpersonal scale); the third composite scale measured how successful one was in coping with daily life (stress managements scale); the fourth composite scale measured one’s stress control (adaptability scale); and, the fifth composite scale measured an individual’s outlook on life (general mood scale). The total emotional quotient score was the overall total emotional intelligence score for each individual (Bar-On, 2004). Once again, the numeric values (descriptive statistics) for the mean, median, mode, and standard deviation of the tests scores for emotional intelligence for the group of the 24 participants (when the EQ-i™ was used) were obtained using the SPSS program. Descriptive statistics referring to the total emotional quotient score were as follows: the mean (105.25), the median (110.00), the mode (94.00), and the standard deviation (16.19). The descriptive statistics for composite scale one (intrapersonal) were the mean (103.75), the median (109.00), the mode (101.00), and the standard deviation (15.90). For composite scale two (interpersonal) the following were the descriptive statistics: the mean (107.25), the median (110.00), the mode (110.00), and the standard deviation (11.28). Composite scale three (stress management) had the following
descriptive statistics: the mean (103.62), the median (105.50), the mode (88.00), and the standard deviation (17.12). In composite scale four (adaptability) the descriptive statistics were as follows: the mean (105.96), the median (107.50), the mode (121.00), and the standard deviation (16.06). The descriptive statistics for the fifth scale (general mood) included the following: the mean (103.83), the median (112.00), the mode (112.00), and the standard deviation (16.16). These numeric values for the descriptive statistics of the EQ-i™ were portrayed in Table 4-2.

Additionally, to reiterate prior chapters for the purpose of the reader, there were a total of 133 statements in this particular survey for testing emotional intelligence that the participants were required to respond to. Furthermore, the responses were based on a five point Likert-type scale to assess how one feels, thinks, or acts in “most” situations the majority of the time (1=very seldom or not true of me to 5=very often true of me or true of me). The EQ-i™ scores are similar to that of IQ tests, with a mean score of 100 and a standard deviation of 15. For example, as can be seen in Table 4-2, the mean score for the total emotional quotient was 105.25, indicating that the group of 24 participants appeared to score slightly higher than an average score of 100. Despite this, the sample size was too small to determine overall emotional intelligence for full-time office employees at the university in this study.

**Internal Consistency for the MSCEIT© and EQ-i™**

Prior to examining hypothesis 1, the subscales representing the four branches (quasi-independent variables) of emotional intelligence (perceiving emotions, facilitating thought, understanding emotions, and managing emotions) were derived from the Mayer-Salovey Caruso-Emotional Intelligence Test (MSCEIT©). All “A” and “E” values were
summed to create the Perceiving Emotions subscale, all “B” and “F” values were summed to create the Facilitating Thought subscale, all “C” and “G” values were summed to create the Understanding Emotions subscale, and all “D” and “H” values were summed to create the Managing Emotions subscales.

Cronbach’s alpha test for the internal reliability of the survey instrument was conducted on the 50 items comprising the Perceiving Emotions subscale. Cronbach’s alpha measures the ability of the subscales (two tasks per Branch) to measure the variable of interest. George and Mallery (2003) suggest the following rules of thumb for evaluating alpha coefficients, > 0.9 – Excellent, >0.8 – Good, > 0.7 – Acceptable, > 0.6 – Questionable, > 0.5 – Poor, < 0.5 – Unacceptable. Cronbach’s alpha coefficient for the composite of the 50 items of the subscale Perceiving Emotions was 0.89, making this a good measure. Cronbach’s alpha coefficient for the composite of the 28 items of the Facilitating Thought subscale was 0.67, making this a questionable measure. Cronbach’s alpha coefficient for the composite of the 31 items of the Understanding Emotions subscale was 0.30, making this an unacceptable measure. Cronbach’s alpha coefficient for the composite of the 29 items of the Managing Emotions subscale was 0.66, making this a questionable measure.

Cronbach’s alpha test was also conducted on the 15 EQ-i™ subscales, (as well as two additional scales: Positive Impression scale and Negative Impression scale) and only tested since these two scales were part of the instrument, but do not comprise the total EQ score. It is important to note that several of the questions were reverse coded as per the instrument developer, but the questions are not reported in the user survey manual nor can these be reported in this research study, as per the instrument developer. Cronbach’s
alpha coefficient for the composite of the eight items of the subscale Emotional Self-Awareness was 0.85, making this a good measure. Cronbach's alpha coefficient for the composite of the seven items of the subscale Assertiveness was 0.81, making this a good measure. Cronbach's alpha coefficient for the composite of the nine items of the subscale Self-Regard was 0.87, making this a good measure. Cronbach's alpha coefficient for the composite of the nine items of the subscale Self-Actualization was 0.88, making this a good measure. Cronbach's alpha coefficient for the composite of the seven items of the subscale Independence was 0.68, making this a questionable measure. Cronbach's alpha coefficient for the composite of the eight items of the subscale Empathy was 0.41, making this an unacceptable measure. Cronbach's alpha coefficient for the composite of the eleven items of the subscale Interpersonal Relationship was 0.89, making this a good measure. Cronbach's alpha coefficient for the composite of the ten items of the subscale Social Responsibility was 0.37, making this an unacceptable measure. Cronbach's alpha coefficient for the composite of the eight items of the subscale Problem Solving was 0.86, making this a good measure. Cronbach's alpha coefficient for the composite of the ten items of the subscale Reality Testing was 0.78, making this an acceptable measure. Cronbach's alpha coefficient for the composite of the eight items of the subscale Flexibility was 0.90, making this an excellent measure. Cronbach's alpha coefficient for the composite of the nine items of the subscale Stress Tolerance was 0.90, making this an excellent measure. Cronbach's alpha coefficient for the composite of the nine items of the subscale Impulse Control was 0.88, making this a good measure. Cronbach's alpha coefficient for the composite of the nine items of the subscale Happiness was 0.92, making this an excellent measure. Cronbach's alpha coefficient for the composite of the
eight items of the subscale Optimism was 0.83, making this a *good* measure. Cronbach’s alpha coefficient for the composite of the eight items of the subscale Positive Impression was 0.72, making this an *acceptable* measure. Cronbach’s alpha coefficient for the composite of the seven items of the subscale Negative Impression was 0.64, making this a *questionable* measure. It is important to note that the Positive and Negative Impression scales are used only to detect if a participant was trying to make either a positive or negative impression. Although these two scales do not comprise the total EQ of an individual, the scales may be related to the overall EQ scores if the participants did not answering honestly. For both the MSCEIT© and EQ-i™, internal consistency scores were very similar to the internal consistency scores obtained by the instrument developers.

**Pearson r**

Pearson product-moment *r* was conducted to assess if relationships existed between variables in the study. Correlation was an appropriate statistical measure when the research purposes, "...are concerned primarily with finding out whether a relationship exists and with determining its magnitude and relationship," (Pagano, 1990, p. 117).

Pearson *r* correlation (product-moment correlation) is a bivariate measure of association (strength) of the relationship between two variables. Pearson *r*, "...is the slope of the least-squares linear regression line when the scores are plotted as *z* scores...and measures the extent to which paired scores occupy the same or opposite positions within their own distributions," (Pagano, 1990, pp. 119-120). Given that all variables were continuous (interval/ratio data) and the hypotheses sought to assess the relationships, or how the distribution of the *z* scores varied, Pearson *r* correlations were the appropriate bivariate
statistic, due to the limitation of the sample size in this research study (as addressed above). Since sample size requirements to establish the nature of a relationship between two variables through correlation analyses were smaller than sample size requirements for establishing a valid model of prediction using multiple regression analyses, it was evident that the sample size in this research study was insufficient for the multiple regression analyses to be conducted. Therefore, simple linear (bivariate) correlation analyses were conducted.

Correlation coefficients, $r$, vary from 0 (no relationship) to 1 (perfect linear relationship) or -1 (perfect negative linear relationship). Positive coefficients indicate a direct relationship, where as one variable increases, the other variable also increases. Negative correlations coefficients indicate an inverse relationship, where as one variable increases, the other variable decreases. Cohen’s (1998) standard was used to evaluate the correlation coefficient, where 0.2 represented a weak association between the two variables, 0.5 represented a moderate association, and 0.8 represented a strong association (Howell, 1992).

**Hypothesis 1**

*Emotional intelligence (MSCEIT©) (perceiving emotions, facilitating thought, understanding emotions, and managing emotions) are significant explanatory variables of individual workplace performance.*

**Hypothesis One**

To examine hypothesis one (H1), the assumptions of Pearson product moment $r$ (correlation) were assessed. Outliers were identified as those values more than three standard deviations from the mean. Scores outside 3 standard deviations indicate a value
that is unlikely to occur. In a normal distribution, 99% of the scores should lie within three standard deviations. One outlier was identified for the subscale Understanding Emotions and was removed because it was not a normal score and not representative of the sample. The assumption of linearity was assessed by examination of scatter plots and the variables were found to be linearly related; therefore, the assumption was met. The assumption of normality was assessed by examination of histograms and a One-Sample Kolmogorov-Smirnov (K-S Test). The One-Sample K-S Test is a non-parametric, goodness-of-fit test (Nunnally & Bernstein, 1994; Tabachnick & Fidell, 2005). Data are tested against an expected distribution of values, yielding a significant finding if the data are found to be significantly different from a normal distribution. The results of the test were not significant, indicating that the variables are normally distributed. In examination of the relationship of the four branches of the MSCEIT and Performance, four Pearson (bivariate) correlations were conducted. The results of the bivariate correlations are summarized in Table 4-3 where there was no significant relationships between the four branches of the MSCEIT and Performance. Therefore, H1 was not supported based on these results.
Hypothesis 2

Emotional intelligence quotient (EQ-i™) (intrapersonal, interpersonal, adaptability, stress management, and general mood) are significant explanatory variables of individual workplace performance.

Hypothesis Two

To examine hypothesis two (H2), the assumptions of Pearson (bivariate) product moment $r$ (Correlation) were assessed. Outliers were identified as those values more than three standard deviations from the mean and through examination of boxplots. No outliers were identified. The assumption of linearity was assessed by examination of scatter plots and the variables were found to be linearly related; therefore, the assumption was met. The assumption of normality was assessed by examination of histograms and a One-Sample Kolmogorov-Smirnov Test. The results of the test were not significant, indicating that the variables are normally distributed. There were no missing values in the variables of interest for these analyses. In examination of the relationship of the five
branches of the EQ-i™ and Performance, five Pearson correlations were conducted. The results of the correlations are summarized in Table 4-4, where there is no significant relationship between the five branches of the EQ-i™ and Performance. Therefore, H2 was not supported based on these results.

Table 4-4

Pearson (Bivariate) Correlations on Five Composite Scales of the EQ-i™ and Performance

<table>
<thead>
<tr>
<th>EQ-i™</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrapersonal</td>
<td>0.13</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>0.33</td>
</tr>
<tr>
<td>Adaptability</td>
<td>0.12</td>
</tr>
<tr>
<td>Stress Management</td>
<td>-0.15</td>
</tr>
<tr>
<td>General Mood</td>
<td>0.10</td>
</tr>
</tbody>
</table>

Note. **p < 0.01 and *p < 0.05.

Hypothesis 3

The original hypothesis was as follows: The EQ-i™ has significantly greater explanatory power of individual workplace performance than the MSCEIT© for individual workplace performance. However, due to the small sample size an alternative hypothesis was utilized:

There is a significant relationship between the total EQ-i™ and individual workplace performance (H3).
Hypothesis Three

To reiterate, due to the limitation of the sample size the original hypothesis was not able to be tested as originally intended; therefore, an alternative hypothesis and methodology (Pearson product moment \( r \)) for statistical analysis was used to examine hypothesis three. The assumptions of Pearson (bivariate) product moment \( r \) (correlation) were assessed for the variable Total EQ-i™. Outliers were identified as those values more than three standard deviations from the mean and through examination of boxplots. No outliers were identified. The assumption of linearity was assessed by examination of scatter plots and the variable was found to be linearly related; therefore the assumption was met. The assumption of normality was assessed by examination of a histogram and a One-Sample Kolmogorov-Smirnov Test. The results of the test were not significant, indicating that the variable was normally distributed. There were no missing values in the variables of interest for these analyses. In examination of the relationship of Total EQ-i™ and Performance, a Pearson (bivariate) correlation was conducted. The results of the bivariate correlations were not significant, \( r (22) = 0.13, ns \), indicating no significant relationship between Total EQ-i™ and Performance.

To further examine hypothesis 3, the variables Total EQ-i™ and Performance were dichotomized by splitting the variables at the median, and a Pearson chi-square was conducted because it examines the relationship between two categorical variables. The chi-square was not significant, \( \chi^2 (1) = 0.00, ns \), indicating that there was no significant pattern of relationship between the variables Total EQ-i™ and Performance. The number one in parentheses was the degrees of freedom. The results have been summarized in Table 4-5.
Table 4-5

Cross-Tabulation between Total EQ-i™ and Performance

<table>
<thead>
<tr>
<th></th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
</tr>
<tr>
<td>High</td>
<td>6 (50.0%)</td>
</tr>
<tr>
<td>Total EQ-i™</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>6 (50.0%)</td>
</tr>
</tbody>
</table>

Hypothesis 4

The original hypothesis for this study was as follows: *Demographic profiles and emotional intelligence (perceiving emotions, facilitating thought, understanding emotions, and managing emotions) are significant explanatory variables of individual workplace performance (MSCEIT®).* However, due to the small sample size an alternative hypothesis was used:

*Demographic profiles for variables education, work level, and gender are significant explanatory variables (H4).*

**Hypothesis Four**

To examine hypothesis four (H4), Pearson (bivariate) correlations were conducted on the demographic variable Age and the variable Performance. The results of the correlation were not significant, $r (22) = -0.30, ns$, indicating no significant relationship between Age and Performance.
In order to examine H4, the variables Performance and Education were dichotomized by splitting the variable Performance at the median and grouping the variable Education into Bachelors and below and grouping Masters with Doctorate. A Pearson chi-square was conducted on the variables dichotomized Performance and dichotomized Education. The chi-square on dichotomized Performance and dichotomized Education was not significant, $\chi^2 (1) = 0.00$, ns, indicating that there was no significant pattern of relationship between the variables dichotomized Performance and dichotomized Education. These results are summarized in Table 4-6.

### Table 4-6

*Cross-Tabulation between Dichotomized Education and Performance*

<table>
<thead>
<tr>
<th>Performance</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>7 (58.3%)</td>
<td>7 (58.3%)</td>
</tr>
<tr>
<td>Low</td>
<td>5 (41.7%)</td>
<td>5 (41.7%)</td>
</tr>
</tbody>
</table>

Additionally, to examine H4, the variable Performance was dichotomized by splitting the variable at the median. A Pearson chi-square was conducted on the variable dichotomized Performance and Work Level. The chi-square on dichotomized Performance and Work Level was not significant, $\chi^2 (2) = 3.14$, ns, indicating that there is
no significant pattern of relationship between the variables dichotomized Performance and Work Level. The results are summarized below in Table 4-7.

Table 4-7

Cross-Tabulation between Dichotomized Performance and Work Level

<table>
<thead>
<tr>
<th>Work Level</th>
<th>Performance</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office Staff</td>
<td>Low</td>
<td>3 (25.0%)</td>
<td>4 (33.3%)</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mid-Level</td>
<td>Low</td>
<td>6 (50.0%)</td>
<td>2 (16.7%)</td>
</tr>
<tr>
<td>Administration</td>
<td>Low</td>
<td>3 (25.0%)</td>
<td>6 (50.0%)</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To continue to examine hypothesis 4, the variable Performance was dichotomized by splitting the variable at the median. A Pearson chi-square was conducted on the variable dichotomized Performance and Gender. The chi-square on dichotomized Performance and Gender was not significant, $\chi^2 (1) = 0.20, ns$, indicating that there was no significant pattern of relationship between the variables dichotomized Performance and Gender. The results are summarized in Table 4-8.
Table 4-8

_Cross-Tabulation between Dichotomized Performance and Gender_

<table>
<thead>
<tr>
<th>Gender</th>
<th>Performance</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>8 (66.7%)</td>
<td>9 (75.0%)</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>4 (33.3%)</td>
<td>3 (25.0%)</td>
<td></td>
</tr>
</tbody>
</table>

An assumption of Chi-square is cell counts greater than 5 for a 2 x 2 chi-square and cell counts greater than 5 in 80% of the cells in larger tables. These last two statistical tests (for Chi-square) indeed had cell counts below five in the last two cross-tabulations (and were not valid); however, the chi-square was still conducted. In cases where there was a small sample size and things like this happened, there would have been an increased chance of committing a Type I error (finding a relationship that was not really there). In this case, neither of the chi-squares was significant (so this was a non-issue). Yates Correction could have been applied because of the small sample size, but all this would have made it even more difficult to find a significant relationship, thereby making the test more stringent (Faul, et al., 2007; Nunnally & Bernstein, 1994; Tabachnick & Fidell, 2005). This would have been equivalent to making the test “more” non-significant than it was. Doing so would not have been helpful at all. Additionally, Yates Correction is defined as improving a Chi-Square in order to improve the accuracy of the computation particularly in 2 x 2 tables (Vogt, 2005). However, this statistical method is not used as
often as it once was, "largely because many statisticians think that it may overcorrect for the possibility of Type I error and thus increase the chances of a Type II error" (Vogt, 2005, p. 347). Therefore, this researcher determined that since the test results were not significant applying a Yates correction was unnecessary. To conclude, the results for statistical analyses were not significant and did not support H4.

**Hypothesis 5**

The original hypothesis for the study was as follows: *Demographic profiles and emotional intelligence quotient (intrapersonal, interpersonal, adaptability, stress management, and general mood) are significant explanatory variables of individual workplace performance (EQ-i™).* However due to the small sample size, hypothesis four which indicated the use of an alternative hypothesis: *Demographic profiles for variables education, work level, and gender are significant explanatory variable (H4),* rendered hypothesis five (H5) as unnecessary.

Due to the nature of the small sample size and the use of an alternative statistical procedure conducted to examine H4, it was not deemed necessary to repeat these findings for H5 which were discussed above in H4 (and duly apply to H5). The results for H4 explained that these results were not significant; therefore, this would hold true for H5 indicating that H5 was not supported.

**Research Question**

*Is there a significant relationship between emotional intelligence represented by the MSCEIT© and the EQ-i™, demographic profiles, and workplace performance?*
Answer to Research Question

The results of the analysis were not significant overall, indicating the absence of a relationship between either emotional intelligence scale (MSCEIT© and EQ-i™) and workplace performance. Neither emotional intelligence measure showed superiority in relating to workplace performance. Additionally, no significant relationship(s) was found between demographic profiles and workplace performance, indicating the lack of explanatory power of demographic profiles in relation to workplace performance. This may be due to the small sample size used for this pilot study which will be discussed subsequently in Chapter Five.

Summary

The demographic characteristics (descriptive statistics) for the university employees were discussed in order to lay the ground work for the statistical analyses of the 24 participants of the study by indicating the mean, median, mode and standard deviation. Next, the two major survey instruments were discussed in detail. Both the MSCEIT© and the EQ-i™ subscales were expanded upon so that the reader may understand how the subsequent analyses were obtained. The researcher then conducted Cronbach’s Alpha on the MSCEIT© and the EQ-i™ to test for the internal consistency of the surveys. Cronbach’s alpha measures the ability of the composite subscale to measure the variable of interest.

Next, the hypotheses were tested. Hypothesis one was examined using Pearson (bivariate) product moment r (Correlation). One outlier was identified for the subscale Understanding Emotions was removed, because it was not a normal score and not representative of the sample. The assumption of linearity was assessed by examination of
scatter plots and the variables were found to be linearly related; therefore, the assumption was met. The assumption of normality was assessed by examination of histograms and a One-Sample Kolmogorov-Smirnov (K-S Test). The One-Sample K-S Test is a non-parametric, goodness-of-fit test. Data are tested against an expected distribution of values, yielding a significant finding if the data are found to be significantly different from a normal distribution. The results of the test were not significant, indicating that the variables were normally distributed. In examination of the relationship of the four branches of the MSCEIT© and Performance, four Pearson (bivariate) correlations were conducted. The results of the bivariate correlations are summarized in Table 4-3, where there was no significant relationship between the four branches of the MSCEIT© and Performance.

Hypothesis two was examined using Pearson (bivariate) product moment r (Correlation). Outliers were identified as those values more than three standard deviations from the mean and through examination of boxplots. No outliers were identified. The assumption of linearity was assessed by examination of scatter plots and the variables were found to be linearly related; therefore, the assumption was met. The assumption of normality was assessed by examination of histograms and a One-Sample Kolmogorov-Smirnov Test. The results of the test were not significant, indicating that the variables are normally distributed. There were no missing values in the variables of interest for these analyses. In examination of the relationship of the five branches of the EQ-i™ and Performance, five Pearson correlations were conducted. The results of the correlations indicated there was no significant relationship between the five branches of the EQ-i™ and Performance.
For hypothesis three, the assumptions of Pearson (bivariate) product moment $r$ (Correlation) were assessed for the variable Total EQ-i™. Next, outliers were identified as those values more than three standard deviations from the mean and through examination of boxplots. No outliers were identified. The assumption of linearity was assessed by examination of scatter plots and the variable was found to be linearly related; therefore, the assumption was met. The assumption of normality was assessed by examination of a histogram and a One-Sample Kolmogorov-Smirnov Test. The results of the test were not significant, indicating that the variable was normally distributed. Furthermore, there were no missing values in the variables of interest for these analyses. In examination of the relationship of Total EQ-i™ and Performance, a Pearson (bivariate) correlation was conducted. The results of the bivariate correlations were not significant, $r (22) = 0.13, ns$, indicating no significant relationship between Total EQ-i™ and Performance.

To assess hypothesis four, a Pearson (bivariate) correlations was conducted on the demographic variable Age and the variable Performance. The results of the correlation were not significant, $r (22) = -0.30, ns$, indicating no significant relationship between Age and Performance.

Next, the variables Performance and Education were dichotomized by splitting the variable, Performance at the median and grouping the variable Education into Bachelors and below and grouping Masters with Doctorate. A Pearson chi-square was conducted on the variables dichotomized Performance and dichotomized Education. The chi-square on dichotomized Performance and dichotomized Education was not significant, $\chi^2 (1) = 0.00, ns$, indicating that there was no significant pattern of
relationship between the variables dichotomized Performance and dichotomized Education.

Additionally, to examine H4, the variable Performance was dichotomized by splitting the variable at the median. A Pearson chi-square was conducted on the variable dichotomized Performance and Work Level. The chi-square on dichotomized Performance and Work Level was not significant \( \chi^2 (2) = 3.14, ns \), indicating that there was no significant pattern of relationship between the variables dichotomized Performance and Work Level.

To continue to examine H5, the variable Performance was dichotomized by splitting the variable at the median. A Pearson chi-square was conducted on the variable dichotomized Performance and Gender. The chi-square on the dichotomized Performance and Gender was not significant, \( \chi^2 (1) = 0.20, ns \), indicating that there was no significant pattern of relationships between the variables dichotomized Performance and Gender.

Hypothesis five was rendered unnecessary, due to the use of an alternative hypothesis used in the study to examine hypothesis four. The results for hypothesis four indicated that there was no significant relationship between any of the variables. Therefore, it was deemed unnecessary to reiterate the statistical analyses used in hypothesis four to address hypothesis five.

Once the hypotheses were analyzed, an attempt to answer the research question was made. Due to lack of significant findings, the research question could not be answered. The overall results were not significant, indicating an absence of a relationship between emotional intelligence and workplace performance for either of the two major scales used in the study (MSCEIT© and EQ-i™). It could not be demonstrated whether
the MSCEIT© or EQ-i™ showed superiority with relation to emotional intelligence and workplace performance; and no significant relationship(s) was found between demographic profiles and workplace performance. This too indicated the lack of explanatory power for the demographic profiles in relation to workplace performance. Thus, it appeared that the results may have been due to the limited size of the sample which will be further discussed in the next chapter.
CHAPTER V

Discussions

Overview of Study

This study was developed to investigate the relationships between emotional intelligence and individual workplace performance within a university setting. The pivotal point for this study was derived from the researcher’s educational engagement at the university examined and imbued this researcher with curiosity on the research topic, which gave impetus to examining the relationships between emotional intelligence and individual workplace performance for office employees (office staff, mid-level administrators, and administrators) within the university. Both survey instruments, the MSCEIT© and EQ-i™, have never been used within the same study, nor has either instrument been compared to the actual results of a workplace, performance review, and in particular with one such as the Performance Review Scale©, or the demographic profile survey designed by this researcher. The overall outcome of the study was designed to gain a better understanding of the relationships and factors contributing to emotional intelligence and individual workplace performance, to elucidate which of the two emotional intelligence models (MSCEIT© and EQ-i™) in the study had better explanatory power for individual workplace performance, and to examine if demographic survey variables (collective branch scores for the MSCEIT© and collective composite scales scores for the EQ-i™) were influential factors as well. The research question and original five hypotheses were derived from existing theoretical frameworks and empirical studies; and attempted to explain the gaps in the literature by critically analyzing the claim that the regulation of emotional intelligence for individuals may converge with
workplace performance, (and possibly elements of success, and social effectiveness). However, alternative hypotheses had to be incorporated into the study, due to the small sample size.

The study was conducted using two major survey instruments for data collection: the MSCEIT® V2.0 (Mayer-Salovey-Caruso Emotional Intelligence Test) (Mayer, Salovey, & Caruso, 2002) and the EQ-i™ (Emotional Intelligence Inventory) (Bar-On, 2004), as well as a simplistic, demographic profile survey to obtain demographic general characteristics of the participants. The collected data from the MSCEIT®, the EQ-i™, as well as the demographic profile survey were correlated with the Performance Review Scale© (Administaff, Inc., 2006) the representative measure of individual workplace performance (dependent variable) using existing data collected by the university during the year 2006 for university employees (e.g. office staff, mid-level administrators, and administrators). The MSCEIT® and the EQ-i™ could not be compared to one another to ascertain which instrument might have better explanatory power in measuring emotional intelligence, and for the purpose of determining differentiators for successful, effective individual workplace performance due to the small sample size. The total EQ-i™ was correlated with workplace performance. Additionally the demographic variables were correlated with workplace performance to assess whether demographics impacted workplace performance. Overall, no significant relationships were found.

Interpretations and Practical Implications

The intelligence quotients for intellectual ability or expertise in work environments are no longer considered leading factors in being hired or promoted (Cherniss & Goleman, 2001; Wolff, Druskat, Koman, and Messer, 2006). During the
1990's a dramatic global change began occurring, affecting traditional workplace rules for hiring and promoting employees (Wolff et al., 2006). More recently, organizations tend to prefer to hire individuals with high degrees of emotional intelligence (versus the intelligence quotient) with the ultimate purpose of heightening workplace performance in order to increase productivity and profitability, decrease absenteeism and turnover, and increase cooperation among employees to heighten motivation within employees. Since emotional intelligence has currently been touted as the leading factor for being hired and promoted, this fact has made it prudent for employers to gain a better understanding of the relationships and factors which contribute to emotional intelligence and individual workplace performance.

Employers want individuals who are motivated to accomplish tasks and perform in the workplace to the best of their ability. However, a keener understanding of what drives an individual to get along with others to accomplish work related tasks within the workplace in a positive manner has been a key driver in this realm. How an employee conducts one's self in the work environment (e.g. interpersonal relationship) differentiates an employee for success and effectiveness in the workplace. The critical but practical gains and outcomes include employee and employer satisfaction for individual workplace performance issues, as well as future implications for emotional intelligence as a leading factor for being hired and promoted. Despite the fact that a plethora of information exists on emotional intelligence, there still remains a paucity of empirical research to support the notion of "those" specific variables that are interconnected between emotional intelligence and individual workplace performance which are
practical issues for employers to address. Thus, a deeper understanding of emotional intelligence may have practical implications for individual workplace performance.

Conclusions

In conclusion, the results of this study indicated that the MSCEIT© and the EQ-i™ did not differ significantly in their relationships to individual workplace performance of the university employees, as neither were significantly related to workplace performance. Additionally when the demographic variables were added, the variables did not appear to indicate a statistical significance. Overall, this may be due to the small sample size which will be further expanded upon in this chapter.

First, alternative statistical methodology (and alternative hypotheses) needed to be used due to the limited sample size for the study. Instead of the originally proposed multiple regression analyses, simple linear correlational (bivariate) analyses were utilized, as well as chi-square analyses. The results of statistical analyses for the MSCEIT© indicated that there was not a statistically significant relationship between workplace performance and the four (quasi-independent variables) collective branches (or subscales) representing the MSCEIT©. In addition, the results of statistical analyses for the EQ-i™ indicated that there was not a statistically significant relationship between the EQ-i™ five composite scales (the quasi-independent variables of emotional intelligence), the total EQ score, and workplace performance.

Next, when the demographic variables were added for statistical analysis there was no significant relationship between the demographics and the dependent variable workplace performance. Although demographic variables along with emotional
intelligence may be factors to examine for workplace performance, the sample size was too small to assess as such.

Finally, due to the current interest in and research on emotional intelligence and job or individual workplace performance it is evident that emotions may play a large role in individual interactions in the workplace, profoundly influencing workplace performance. However, the current empirical data is lacking, because many researchers are still not certain what the true definition for emotional intelligence should encompass or how to best measure and assess this elusive concept. Since research has been increasingly targeting emotional intelligence and workplace performance which is thought to be linked to relationships in the workplace and subsequently to workplace performance, there are a multitude of researchers in the field of emotional intelligence that believe these are key factors employers should address and assess, both prior to hiring, as well as monitoring in the workplace. In addition, finding the best instrument to measure emotional intelligence, demographic variables could be factors that should be included when analyzing emotional intelligence. Therefore, the following three primary conclusions have been drawn:

1. The importance of the relationships of emotional intelligence and workplace performance reinforces the notion that the complexity of defining emotional intelligence and constructing survey instruments to address this complexity is in need of a broader knowledge base.

2. For the most part researchers lack cohesion in determining an all inclusive definition of emotional intelligence or which measuring tools best assess correlations between emotional intelligence and individual behavior or
performance (e.g. workplace performance); this is primarily due to the fact that having the ability to understand emotional processes are likely influenced by many factors, indicating a more encompassing definition may need to be developed.

3. Several researchers have yielded different, but substantial results when testing emotional intelligence; in other words, various research findings (although substantial) have been equally different regarding what defines emotional intelligence and an exploration of emotional intelligence on workplace performance, or which instrument best tests emotional intelligence, confirming the notion that many more studies need to be done to examine the efficacy of instruments that test emotional intelligence to best address the interplay between emotional intelligence and workplace performance to fill the gaps in the prevailing literature.

Limitations

The study had several limitations, which are addressed in the following section. First, the sample size was too small for a complex study of this magnitude. In addition, for the statistical analyses between workplace performance and the use of either the MSCEIT© or the EQ-i™, the small sample size appears to have impinged on possibly finding statistical significance. Lastly, emotional intelligence appeared to be comprised not only of competencies and abilities, but may include various other variables such as, other demographics (i.e. ethnicity), social factors, biological components, and the like that were not examined in this study.
Despite the fact that this is a pilot study, the small sample size was problematic and resulted in a substantial limitation of the study. Due to the small sample size, comparisons of the relationship between workplace performance and emotional intelligence (as measured by the MSCEIT© or the EQ-i™) across various demographic characteristics were unduly limited, since the sample size affects the amount of variability for sample results, and demographics for the target sample were unobtainable. Additionally, because the sample size was small the study cannot be generalized to a similar work environment (e.g. an institution of higher learning) without a degree of caution. In addition, this university setting is most likely different than other institutions of higher learning and is most definitely different than other business or organizational settings, which further indicates that the results of the study cannot be generalized.

A second limitation of the study related to the sample size in that there was a fair chance that a Type II error could have been made when the analyses were conducted. When analyzing the relationship between workplace performance and the MSCEIT© variables, and for the relationship between workplace performance and the EQ-i™ variables there might have been a probability of making a Type II error. The only way to have reduced these probabilities would have been to increase the sample size, by sending out the surveys throughout the academic year as opposed to sending out the surveys during late Spring and early Summer sessions. The implication of this error is that the null hypothesis was really false and was not rejected. It might also be possible that there may actually be a relationship between workplace performance and emotional intelligence (as measured by the MSCEIT© and EQ-i™) even though this study had a small sample size and insufficient evidence to indicate that such a relationship existed.
Therefore, it is possible that further research into this field of study could yield significant results that might be more indicative of a relationship between workplace performance and emotional intelligence.

Finally, emotional intelligence appears to be comprised not only of competencies and abilities, but may include various other variables such as demographic profiles of individuals, as well as additional variables that were not examined in this study. For example, the emotional intelligence processes that emerge in social interaction(s) and the underpinnings of individual differences, such as ethnicity and cultural attitudes were not assessed limiting the study in this realm. Since it appears that emotional intelligence may also involve how an individual has been socialized, what personality traits may induce an individual to act and react in certain ways psychologically and emotionally (possibly due to whatever experiences an individual has had over the years), and/or the biological components of the brain involved in thought processes that is beyond the scope of this study, it is apparent the study is limited by design. However, this research study may in fact be used as a pilot study and springboard for future scholarly research.

**Recommendations for Future Study**

Although varying dimensions, variables, and characteristics may differ in other types of business environments, or for the purpose of this particular study at other institutions of higher learning, the study could be used as a pilot study to provide a framework for future scholarly inquiry. As such this study was designed to help advance research in the field of emotional intelligence and individual workplace performance outcomes. Therefore, the following recommendations are offered:
1. Both qualitative and quantitative research could be combined and helpful in obtaining a more in depth understanding of the underpinnings of emotional intelligence and individual workplace performance to create a wider knowledge base.

2. Possibly longitudinal studies, although costly, may further elucidate which variables are most important in determining emotional intelligence and workplace performance.

3. Defining emotional intelligence in such a way that acceptance of the definition is more encompassing and accepted by various researchers which can be accomplished by incorporating other fields and/or disciplines to permit social scientists to further the advancement of research in this field.

4. Incorporating various organizational settings based on this research design may yield more statistically significant results.

5. Replicating the study with a larger sample size in a similar setting (e.g. and institution of higher learning) may glean additional statistical significance, which in turn might permit the ability to generalize the results.

6. A replication of this study in the same university utilized for this research, by obtaining data collection from respondents during various times of the academic year may yield a larger sample size.

7. Creating additional and more encompassing survey instruments (with the inclusion of more highly specified variables) to examine and assess emotional intelligence would be valuable.
Summary

The current study was developed to investigate emotional intelligence and individual workplace performance in a university setting. Due to the current interest regarding emotional intelligence and individual workplace performance (or individual job performance per se), the overall outcome was designed to gain a better understanding of the relationships and factors contributing to the elusive concepts of emotional intelligence and individual workplace performance. Five research hypotheses and one research question were (originally) generated to examine correlations between emotional intelligence and individual workplace performance. Due to the small sample size the use of alternative hypotheses were necessary.

The results of the statistical analyses indicated that there did not appear to be a statistically significant relationship between workplace performance and the quasi-independent variables representing the MSCEIT© branches (subscales) or for the quasi-independent variables representing the EQ-i™ composite scales. The results of this study failed to demonstrate whether the MSCEIT© and the EQ-i™ differed significantly in their relationships to individual workplace performance of university employees based on the limited sample size. Additionally, there did not appear to be statistically significant differences when the demographic variables were added as additional predictors of workplace performance or when the total EQ-i™ score was compared with workplace performance.

This study failed to demonstrate that there was a significant relationship between the variables representing emotional intelligence and workplace performance, and there was a possibility a type II error occurred. Therefore, it is possible that there was a
relationship and it was not detected in this study. Thus it appeared the sample size was too small to make comparisons for this complicated study.

In addition, there were other variables not examined in this research study that might have yielded more substantial results for a complicated study of this magnitude. Although existing literature and empirical evidence appeared to support the notion that emotional intelligence and individual workplace performance co-exist, the two major assessment tools (MSCEIT© and EQ-i™) utilized may not include specific factors possibly needed to support the notion that emotional intelligence and individual workplace performance are related. In reality, no existing assessment tools are perfect by design, creating possibilities of over or under prediction of relationships. While an interesting research exercise, this study was restricted by several limitations, negating the possibility of generalizability, most predominately the size of the sample for the study, which may not be representative of the target population. Additionally, the study was conducted within only one university which may be inherently different than other universities that might have been studied. Therefore, it is suggested that there is a broad possibility for a great deal of future scholarly inquiry into this research topic.
REFERENCES


Ashkanasy, N. M. (2002). Studies of cognition and emotion in organizations:


Shaffer, R. D., & Shaffer, M. A. (2005). Emotional intelligence abilities, personality,


BIBLIOGRAPHY


Appendix A

Permission of Vice President of Finance and Business

Tina Bauer Goldsmith
Tel:

12/11/06

Ms. Laurie Levine
Vice President for Business & Finance
Lynn University
3601 N. Military Trail
Boca Raton, Florida 33431

Dear Ms. Levine:

My name is Tina Bauer Goldsmith and I am a doctoral candidate at Lynn University. My major is Global Organizational Leadership, with a specialization in business. The topic of my doctoral dissertation is Relationships between Emotional Intelligence and Individual Workplace performance. My research study aims to bridge the theoretical and empirical gaps of literature regarding emotional intelligence and individual workplace performance in organizations. Dr. Emad Wajeeh is my advisor and Dissertation Chairperson and the Director of Institutional Research and Planning at Lynn University. I am writing this letter on behalf of myself, to request permission to commence my research study Spring 1 of 2007 after I receive IRB approval.

Purpose

This study is a non-experimental, quantitative correlational (explanatory) and causal comparative (exploratory) survey research design to examine the relationships between emotional intelligence and individual workplace performance. The design primarily uses quantitative methods; however, qualitative methods are also used in data analysis generated by open ended demographic survey questions.

Data Collection

There are two periods of data collection. At the beginning of the study, this researcher will offer an invitation to participate in the study. This will be sent through interoffice mail to all Lynn University administrators and office staff employees, which will include a demographic profile survey to be completed and returned to the office of Director of Research and Planning, should the employees wish to participate. Once it is determined how many employees will participate, two surveys measuring emotional intelligence (EI) will be ordered and mailed through interoffice mail once again; however, Dr. Wajeeh will obtain Performance Review Scale scores, for workplace performance from your office, Director of Human Resources, after this researcher obtains written permission from Dr. Blizinski, to do so. Dr. Wajeeh will then number code the performance reviews and each of the two EI surveys with corresponding numbers and mail only the EI surveys to the respective participants. The performance reviews will be
kept in a locked file cabinet at all times. Upon participant completion of the number coded surveys, they will be returned in blank envelopes via interoffice mail to Dr. Wajeeh’s office and kept under lock and key, which will then be turned over to this researcher, along with the number coded corresponding performance reviews. This researcher will then recode the two surveys and the number coded performance scores, and Federal Express the two surveys to Multi-Health Systems, Inc., in Tonawanda, New York for computer generated scores. Once the surveys are scored by Multi-health Systems, Inc. they will be returned to this researcher and all data will be entered into SPSS.

Sample
There will be approximately 260 employees invited to participate in this voluntary research study at Lynn University. The target population is administrators and staff employees; however, the sample population for the research is limited to accessible administrative employees and office staff employees at Lynn University.

Anonymity of Employees
In order to maintain anonymity of the employees from the researcher, each employee participant will be provided with a number code, by Dr. Wajeeh. This code number will be placed on all corresponding assessments, and will further be recoded by this researcher to make the study entirely anonymous to Dr. Wajeeh, to you Dr. Blizinski, and this researcher. This methodology will be further expanded upon to the IRB of Lynn University for IRB approval.

I would greatly appreciate your consent for my request, as soon as possible. Should you require additional information for clarification, please do not hesitate to contact me at the above postal address, email address, or phone number. Dr. Wajeeh, my dissertation chairperson may be contacted via email or by phone, at: [email protected] You may duplicate this form for your records. If you agree with the terms described above, please sign the release form below and return to me at the above address, as well as indicate that you have received this request via email, and additionally respond with your approval through email also.

Sincerely,

Tina Bauer Goldsmith

Permission is granted to conduct the aforementioned study at Lynn University following approval by the Lynn University Institutional Review Board, with administrators and office staff employees, to commence Spring I, 2007.

Signature: [Redacted]

Print Name & Title: [Redacted] VP Business Finance

Date: 12/12/06
Appendix B

Permission of Executive Human Resource Director

Tina Bauer Goldsmith

Tel: ...

12/11/06

Dr. Robert Blizinski
Executive Director of Human Resources
Lynn University
3601 N. Military Trail
Boca Raton, Florida 33431

Dear Dr. Blizinski:

My name is Tina Bauer Goldsmith (I am a doctoral candidate at Lynn University. My major is Global Organizational Leadership, with a specialization in business. The topic of my doctoral dissertation is Relationships between Emotional Intelligence and Individual Workplace performance. My research study aims to bridge the theoretical and empirical gaps of literature regarding emotional intelligence and individual workplace performance in organizations. Dr. Emad Wajeeh is my advisor and Dissertation Chairperson and the Director of Institutional Research and Planning at Lynn University. I am writing this letter on behalf of myself to request permission to commence my research study Spring I of 2007 after I receive IRB approval.

Purpose

This study is a non-experimental, quantitative correlational (explanatory) and causal comparative (exploratory) survey research design to examine the relationships between emotional intelligence and individual workplace performance. The design primarily uses quantitative methods; however, qualitative methods are also used in data analysis generated by open ended demographic survey questions.

Data Collection

There are two periods of data collection. At the beginning of the study, this researcher will offer an invitation to participate in the study. This will be sent through interoffice mail to all Lynn University administrators and office staff employees, which will include a demographic profile survey to be completed and returned to the office of Director of Research and Planning, should the employees wish to participate. Once it is determined how many employees will participate, two surveys measuring emotional intelligence (EI) will be ordered and mailed through interoffice mail once again; however, Dr. Wajeeh will obtain Performance Review Scale scores, for workplace performance from your office, Director of Human Resources, after this researcher obtains written permission from you, Dr. Blizinski, to do so. Dr. Wajeeh will then number code the performance reviews and each of the two EI surveys with corresponding numbers and mail only the EI surveys to the respective participants. The performance reviews will be...
kept in a locked file cabinet at all times. Upon participant completion of the number coded surveys, they will be returned in blank envelopes via interoffice mail to Dr. Wajeeh's office and kept under lock and key, which will then be turned over to this researcher, along with the number coded corresponding performance reviews. This researcher will then recode the two surveys and the number coded performance scores, and Federal Express the two surveys to Multi-Health Systems, Inc., in Tonawanda, New York for computer generated scores. Once the surveys are scored by Multi-Health Systems, Inc. they will be returned to this researcher and all data will be entered into SPSS.

Sample
There will be approximately 260 employees invited to participate in this voluntary research study at Lynn University. The target population is administrators and staff employees; however, the sample population for the research is limited to accessible administrative employees and office staff employees at Lynn University.

Anonymity of Employees
In order to maintain anonymity of the employees from the researcher, each employee participant will be provided with a number code, by Dr. Wajeeh. This code number will be placed on all corresponding assessments, and will further be recoded by this researcher to make the study entirely anonymous to Dr. Wajeeh, to you Dr. Blizinski, and this researcher. This methodology will be further expanded upon to the IRB of Lynn University for IRB approval.

I would greatly appreciate your consent for my request, as soon as possible. Should you require additional information for clarification, please do not hesitate to contact me at the above postal address, email address, or phone number. Dr. Wajeeh, my dissertation chairperson may be contacted via email at: [email protected] or by phone, at: [redacted]. You may duplicate this form for your records. If you agree with the terms described above, please sign the release form below and return to me at the above address, as well as indicate that you have received this request via email, and additionally respond with your approval through email also.

Sincerely,

Tina Bauer Goldsmith

Permission is granted to conduct the aforementioned study at Lynn University following approval by the Lynn University Institutional Review Board, with administrators and office staff employees, to commence Spring 1, 2007.

Signature: [redacted]
Print Name & Title: [redacted], Exec. Dir. Human Employee
Date: 2/1/06
Appendix C

Permission for the MSCEIT© and EQ-i™

Office of Institutional Research Planning & Assessment

Lynn North Building, 2nd Floor
Boca Raton, FL 33431-8460
Phone: (561) 355-7774
Fax: (561) 355-7773
Web address: www.lynn.edu

FAX

To: Andrew Appear
Fax: (561) 546-4464
Phone: 1-800-456-0001 x 313

To: Andrew Appear
Fax: (561) 546-4464

Date: 2/20

Andrew Appear, Ph.D.
TO: Trevor Lomas  
Multi-Health System Inc.

FROM: Emad M. Wajeeh, Ph.D.  
Robert Riedel, Ph.D.

SUBJECT: Tina Bauer-Goldsmith Advisors Note

DATE: December 12, 2006

Dear Sir:

This is to certify that our advisee Tina Bauer-Goldsmith is conducting her doctoral research entitled "Relationships between Emotional Intelligence and Individual Workplace Performance" under our supervisions. Please feel free to contact us if you have any questions.

Sincerely,

Emad Wajeeh, Ph.D.  
Director/Dissertation Chair  
Lynn University  
3601 North Military Trail 3601  
Boca Raton, Florida 33431-5598  
Phone: 

Robert Riedel, Ph.D.  
Dissertation Committee Member  
Lynn University  
3601 North Military Trail  
Boca Raton, Florida 33431-5598  
Phone:
December 13, 2006

Direct Dial: [number]
E-mail: [email]
Re: Tina Goldsmith Research Application

Dear Drs. Wajeeh and Riedel:

Please accept this communication as notification that Tina Goldsmith has been approved for the Multi-Health Systems research discount regarding the Baron Emotional Quotient-inventory and the Mayer-Salovey-Caruso Emotional Intelligence Test. Ms. Goldsmith is eligible to administer these assessment tools for her research study entitled "Relationships between emotional intelligence and workplace performance". This approval expires December 13, 2007.

If you require further information or have any questions, I would be happy to address them.

Best regards,

Trevor Lomas
Research and Development
Multi-Health Systems

For full contact information, visit our website at www.mhs.com.
Appendix D

Permission for Performance Review Scale©

Dear Ms. Turrini,

My name is Tina Bauer Goldsmith (ID#...), I am a doctoral candidate at Lynn University. My major is Global Organizational Leadership, with a specialization in business. The topic of my doctoral dissertation is Relationships between Emotional Intelligence and Individual Workplace performance. My research study aims to bridge the theoretical and empirical gaps of literature regarding emotional intelligence and individual workplace performance in organizations. Dr. Emad Wajeeh is my advisor and Dissertation Chairperson and the Director of Institutional Research and Planning at Lynn University. I am writing this letter on behalf of myself, to request permission to commence my research study Spring 1 of 2007 after I receive IRB approval.

I will need your permission to use your company’s name and the Performance Review Scale name in my dissertation, as well as for publication purposes. According to the guidelines of the Institutional Review Board at Lynn University, your permission is needed. Therefore, I am requesting your permission to go forward with this research.

Purpose
This study is a non-experimental, quantitative correlational (explanatory) and causal comparative (exploratory) survey research design to examine the relationships between emotional intelligence and individual workplace performance. The design primarily uses quantitative methods; however, qualitative methods are also used in data analysis generated by open ended demographic survey questions.

Data Collection
There are two periods of data collection. At the beginning of the study, this researcher will offer an invitation to participate in the study. This will be sent through interoffice mail to all Lynn University administrators and office staff employees, which will include a demographic profile survey to be completed and returned to the office of Director of Research and Planning, should the employees wish to participate. Once it is determined how many employees will participate, two surveys measuring emotional intelligence (EI) will be ordered and mailed through interoffice mail once again; however, Dr. Wajeeh will obtain Performance Review Scale scores, for workplace performance from Human Resources Director, Dr. Robert Blizinski, after this researcher obtains written permission from Dr. Blizinski to do so. Dr. Wajeeh will then number code the performance reviews and each of the two EI surveys with corresponding numbers and mail only the EI surveys to the respective participants. The performance reviews will be kept in a locked file cabinet at all times. Upon participant completion of the number coded surveys, they will be returned in blank envelopes via interoffice mail to Dr. Wajeeh’s office and kept under lock and key, which will then be turned over to this researcher, along with the number coded corresponding performance reviews. This researcher will then recode the two surveys and the number coded performance scores, and Federal Express the two surveys to Multi-Health Systems, Inc., in Tonawanda, New York for computer generated scores. Once the surveys are scored by Multi-Health Systems, Inc. they will be returned to this researcher and all data will be entered into SPSS.

**Sample**

There will be approximately 260 employees invited to participate in this voluntary research study at Lynn University. The target population is administrators and staff employees; however, the sample population for the research is limited to accessible administrative employees and office staff employees at Lynn University.

**Anonymity of Employees**

In order to maintain anonymity of the employees from the researcher, each employee participant will be provided with a number code, by Dr. Wajeeh. This code number will be placed on all corresponding assessments, and will further be recoded by this researcher to make the study entirely anonymous to Dr. Wajeeh, Dr. Blizinski, and the researcher. This methodology will be further expanded upon to the IRB of Lynn University for IRB approval.

I would greatly appreciate your consent for my request, as soon as possible. Should you require additional information for clarification, please do not hesitate to contact me at the above postal address, email address, or phone number. Dr. Wajeeh, my dissertation chairperson may be contacted via email at: [removed] or by phone, at: [removed] You may duplicate this form for your records. If you agree with the terms described above, please sign the release form below and return to me at the above address, as well as indicate that you have received this request via email, and additionally respond with your approval through email also.

Sincerely,

Tina Badler Goldsmith
Permission is granted to conduct the aforementioned study at Lynn University following approval by the
Lynn University Institutional Review Board, with administrators and office staff employees, to commence

[ ] YES [ ] NO

Administaff, Inc. requests that Ms. Bauer Goldsmith include the following language in a
footnote in her dissertation and any publications resulting therefrom: “Use of
ADMINISTAFF and other trademarks owned by Administaff, Inc. in this study implies
no origin, sponsorship, or approval of the study by Administaff, Inc.”

Print Name & Title: [ REDACTED ]  U.P.

Date: 11-27-06
Appendix E

Demographic Survey Instrument

Demographic Survey

JOB DESCRIPTION/TITLE: ___________________________ AGE: __, GENDER: Male Female. (optional)

HIGHEST EDUCATIONAL ATTAINMENT: _______________ YOUR

DEPARTMENT: ______________________

CIRCLE: ADMINISTRATION, MID-LEVEL ADMINISTRATION, OR OFFICE STAFF

***Please return completed surveys no later than 2 weeks after receiving
Participant Invitation

Relationships between Emotional Intelligence and Individual Workplace Performance for University Employee Staff Members:

THIS IS A FOLLOW-UP TO THE INVITATION E-MAIL RECEIVED FROM DOCTORAL CANDIDATE TINA BAUER GOLDSMITH (Doctoral student at Lynn University):

Ms. GOLDSMITH INVITED YOU TO JOIN IN A DISSERTATION RESEARCH STUDY AT LYNN UNIVERSITY, FOR THE ADVANCEMENT OF KNOWLEDGE IN THE FIELD OF EMOTIONAL INTELLIGENCE AND WORKPLACE PERFORMANCE. THANK YOU FOR YOUR WILLINGNESS TO PARTICIPATE IN THIS STUDY.

The purpose of this dissertation study is to gain insight into “emotional intelligence and workplace performance” for professional growth and development. Of major importance, this study includes addressing interpersonal relationship issues (across the board) for personal satisfaction and job satisfaction. All data will be strictly confidential and the results will not be used by the university. This is D.N.R. for dissertation purposes! Participation is voluntary. The completed surveys should be returned within 10 business days in the self-addressed envelope provided!

THE COMPLETION OF “ALL SURVEYS” IS NECESSARY IF YOU CHOOSE TO PARTICIPATE.
Appendix F

Authorization for Voluntary Consent

Lynn University

THIS DOCUMENT SHALL ONLY BE USED TO PROVIDE AUTHORIZATION FOR VOLUNTARY CONSENT

PROJECT TITLE: Relationships between Emotional Intelligence and Individual Workplace Performance
Project IRB Number: 2007-017 Lynn University 3601 N. Military Trail Boca Raton, Florida 33431

I Tina Bauer Goldsmith, am a doctoral student at Lynn University. I am studying Global Leadership, with a specialization in Corporate and Organizational Management. One of my degree requirements is to conduct a research study.

DIRECTIONS FOR THE PARTICIPANT:

You are being asked to participate in my research study. Please read this carefully. This form provides you with information about the study. The Principal Investigator Tina Bauer Goldsmith will answer all of your questions. Ask questions about anything you don’t understand before deciding whether or not to participate. You are free to ask questions at any time before, during, or after your participation in this study. Your participation is entirely voluntary and you can refuse to participate without penalty or loss of benefits to which you are otherwise entitled. You acknowledge that you are at least 18 years of age, and that you do not have medical problems of language or educational barriers that precludes any understanding of explanations contained in this authorization for the voluntary consent.

PURPOSE OF THIS RESEARCH STUDY: The study is about the influence of emotional intelligence on individual workplace performance. There will be approximately 260 number of people invited to participate in this study. All participants are employees of Lynn University either working in the capacity of administration or office staff, at least 18 years of age or older.

Procedures:
If you agree to participate in this research study, you will be asked to complete the following:
1. A demographic survey
2. The MSCEIT survey and the EQ-i survey
“Completing the surveys will constitute your consent to participate in this study.”
POSSIBLE RISKS OR DISCOMFORT: This study involves minimal risk. You may find that some of the questions are sensitive in nature. In addition, participation in this study requires a minimal amount of your time and effort, and may be completed in the comfort of your home to reduce any anxiety that may arise.

POSSIBLE BENEFITS: There may be no direct benefit to you in participating in this research. But knowledge may be gained which may help the organization for which you are employed to facilitate innovation in employment, hiring, employee promotions, and personal insight in the field of Emotional Intelligence and individual workplace performance.

FINANCIAL CONSIDERATIONS: There is no financial compensation for your participation in this research. There are no costs to you as a result of your participation in this study.

CONFIDENTIALITY:
Every effort will be made to maintain confidentiality. Your identity in this study will be treated as confidential. Confidentiality will be assured for the use of the current performance reviews by only using code numbers for employees, held by Human Resources and the Institute of Research Development and Planning. Only these two offices will initially know who you are; however the researcher Tina Bauer Goldsmith will recode the performance reviews and both survey instruments for employee protection.

Every effort will be made to maintain confidentiality; therefore, your identity in this study will be treated as confidential by the researcher Tina Bauer Goldsmith. Data sets will be reported as “group responses.”

The results of this research study may be published in a dissertation, scientific journal, or presented at professional meetings. Additionally, your privacy will be maintained in all publications or presentations resulting from this research study.

All the data gathered during this study, which were previously described. Data will be stored in locked files and destroyed at the end of the research. All information will be held in strict confidence and may not be disclosed unless required by law or regulation.
RIGHT TO WITHDRAW: You are free to choose whether or not to participate in this study. There will be no penalty or loss of benefits to which you are otherwise entitled if you choose not to participate.

CONTACTS FOR QUESTIONS/ACCESS TO CONSENT FORM: Any further questions you have about this study or your participation in it, either now or any time in the future, will be answered by Tina Bauer Goldsmith (Principal Investigator) who may be reached at: [redacted] and Dr. Robert Riedel faculty advisor who may be reached at: [redacted] or riedel@lynn.edu. For any questions regarding your rights as a research subject, you may call Dr. Farazmand, Chair of the Lynn University Institutional Review Board for the Protection of Human Subjects, at [redacted]. If any problems arise as a result of your participation in this study, please call the Principal Investigator Tina Bauer Goldsmith and the faculty advisor (Dr. Robert Riedel) immediately.

I hereby certify that a written explanation of the nature of the above project has been provided to the person participating in this project. A copy of the written documentation provided is attached hereto. By the person's consent to voluntary participate in this study, the person has represented that he/she is at least 18 years of age, and that he/she does not have a medical problem or language or educational barrier that precludes his/her understanding of my explanation. Therefore, I hereby certify that to the best of my knowledge the person participating in this project understands clearly the nature, demands, benefits, and risks involved in his/her participation.

_________________________________________ Date of IRB Approval: _____________
Signature of Investigator
Appendix G

Permission to Conduct a Research at Lynn University

IRB Approval for Research

IRB Project Number 2007-#17:
APPLICATION AND PROTOCOL FOR REVIEW OF RESEARCH INVOLVING HUMAN SUBJECTS OF A NEW PROJECT: Request for Exempt Status __ Expeditied Review __ Convened Full-Board __

IRB ACTION by the IRB Chair or Another Member or Members Designed by the Chair
Exemption Status (See FORM 2): Approved ____ Approved w/provision(s) ____
Expeditied Review (See FORM 3): Approved ____ Approved w/provision(s) ____
Complete FORM 2 (Exempt Status, including categories for exempt status) and Resubmit ______
Complete FORM 3 (Expeditied Review, including categories for expeditied review) and Resubmit ______
Referred For Convened Full-Board Review ______

COMMENTS
Consent Required: No ____ Yes ____ Not Applicable ____ Written ____ Signed _____

Consent forms must bear the research protocol expiration date of ____________.
Application to Continue/Renew is due:
(1) For an Expeditied IRB Review, one month prior to the due date for renewal ________
(2) For review of research with exempt status, by a College or School Annual Review of Research Committee ________.

If the academic unit ("The Colleges and Schools") where the researcher is assigned does not have a committee in place, the application to Continue/Renew is submitted to the IRB, for an Expeditied IRB Review no later than one month prior to the due date.

Other Comments:
IRB Reviewer: ___________________________ Title ________________ Date __________
IRB Reviewer: ___________________________ Title ________________ Date __________
IRB Reviewer: ___________________________ Title ________________ Date __________
IRB Reviewer: ___________________________ Title ________________ Date __________
IRB Reviewer: ___________________________ Title ________________ Date __________

Name of IRB Chair (Print) ___________________________ Date: __________

IRB ACTION by the CONVENED FULL BOARD If Applicable

Date of IRB Review of Application and Research Protocol ____________
IRB ACTION: Approved ______ Approved w/provision(s) ______ Not Approved ______ Other ______

COMMENTS
Consent Required: No ____ Yes ____ Not Applicable ____ Written ____ Signed ______

Consent forms must bear the research protocol expiration date of ____________.
Application to Continue/Renew including an updated consent, is due:
(1) For a Convened Full-Board Review, two months prior to the due date for renewal ________
(2) For an Expeditied IRB Review, one month prior to the due date for renewal ________
(3) For review of research with exempt status, one month prior to the due date for renewal ________.

Other Comments:
Name of IRB Chair (Print) ___________________________ Date: __________

Signature of IRB Chair ___________________________ Date: __________
Appendix H

IRB Approval for Research

**IRB Project Number**
APPLICATION AND PROTOCOL FOR REVIEW OF RESEARCH INVOLVING HUMAN SUBJECTS OF A NEW PROJECT: Request for Exempt Status __ Expedited Review __ Convened Full-Board __

**IRB ACTION by the IRB Chair or Another Member or Members Designed by the Chair**

Exemption Status (See FORM 2): Approved _____; Approved w/provision(s) _____

Expedited Review (See FORM 3): Approved _____; Approved w/provision(s) _____

Complete FORM 2 (Exempt Status, including categories for exempt status) and Resubmit _____
Complete FORM 3 (Expedited Review, including categories for expedited review) and Resubmit _____
Referred For Convened Full-Board Review _____

**COMMENTS**
Consent Required: No _____ Yes _____ Not Applicable _____
Written ______ Signed ______
Consent forms must bear the research protocol expiration date of _______.

Application to Continue/Renew is due:
(3) For an Expedited IRB Review, one month prior to the due date for renewal _______
(2) For review of research with exempt status, by a College or School Annual Review of Research Committee _______. If the academic unit ("The Colleges and Schools") where the researcher is assigned does not have a committee in place, the application to Continue/Renew is submitted to the IRB, for an Expedited IRB Review no later than one month prior to the due date.

Other Comments:

IRB Reviewer: __________________________ Title __________________________ Date _______
IRB Reviewer: __________________________ Title __________________________ Date _______
IRB Reviewer: __________________________ Title __________________________ Date _______
IRB Reviewer: __________________________ Title __________________________ Date _______
IRB Reviewer: __________________________  Title
________________________________________  Date ______

Name of IRB Chair (Print)

________________________________________

Signature of IRB Chair __________________________  Date: ______

IRB ACTION by the CONVENED FULL BOARD  If Applicable

Date of IRB Review of Application and Research Protocol __________
IRB ACTION: Approved_______  Approved w/provision(s)_______  Not Approved_______  Other ______

COMMENTS
Consent Required:  No _____  Yes _____  Not Applicable _____
Written ______  Signed ______
Consent forms must bear the research protocol expiration date of ______

Application to Continue/Renew including an updated consent, is due:
(1)  For a Convened Full-Board Review, two months prior to the due date for renewal ______
(4)  For an Expedited IRB Review, one month prior to the due date for renewal ______
(3)  For review of research with exempt status, one month prior to the due date for renewal ______

Other Comments:

Name of IRB Chair (Print)

________________________________________

Signature of IRB Chair __________________________  Date: ______
Appendix I

Lynn University IRB Approval Letter
Principal Investigator: Dr. Susan Goldsmith
Project Title: Relationships Between Emotional Intelligence and Individual Workplace Performance

IRB Project Number: 2007-017

IRB ACTION by the CONVENED FULL BOARD:
- Date of IRB Review of Application and Research Protocol: 2-12-07
- IRB ACTION: Approved X Approved with sponsor changes Not Approved X Other

COMMENTS:
- Consent Required: No X Yes Not Applicable Written X Other
- Consent Forms were sent with the research proposal expiration date of 6-1-08
- Application to Continue Renewal:
  1) For a Convened Full Board Review, two months prior to the date for renewal
  2) For an Expedited IRB Review, one month prior to the due date for renewal
  3) For review of research with a minor change, one month prior to the due date for renewal

Name of IRB Chair: [Redacted]
Signature of IRB Chair: [Redacted]
Date: 2-12-07

Co-PI: [Redacted]

Re: Approval of the Protocol for Research Involving Human Subjects

Name of Investigator: [Redacted]
IRB Chair: [Redacted]
Date: 2-12-07

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