2015

Affect Intensity as a Moderator of the Relationship Between Emotional Intelligence and Transformational Leadership

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Walden University
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Abstract

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by

Robert T. Schaefer

MBA, University of Phoenix, 2000

BA, Wright State University, 1992

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Organizational Psychology

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Abstract

Researchers have reported mixed findings on the relationship between emotional intelligence (EI) and transformational leadership, leading many to suspect the presence of moderating variables. This study was conducted to address the problem by analyzing the moderating effect that affect intensity may have upon this relationship. Based on a theoretical framework consisting of ability-based EI and the full-range theory of leadership, it was hypothesized that EI would be positively correlated with transformational leadership. In addition, based upon the arousal regulation theory of affect, it was hypothesized that affect intensity would be a statistically significant moderator of that relationship. A convenience sample of leaders (N = 142) working in the hospitality industry completed the Mayer Salovey Caruso Emotional Intelligence Test, the Multifactor Leadership Questionnaire form 5X, and the Affect Intensity Measure. Pearson's Product-Moment correlational analysis revealed that, consistent with expectations, total EI scores and the managing emotions branch scores of EI were positively correlated with transformational leadership; however, the branch scores for perceiving, using, and understanding emotion were not. Contrary to expectations, affect intensity was not a statistically significant moderator in this sample. Findings from this research support the proposition that EI may best predict transformational leadership within service-based environments where employees face intense emotional labor demands. A thorough understanding of the ways in which EI predicts leader behavior will not only help organizations improve leader selection and development, but also help to improve vital social outcomes, such as employee job satisfaction, engagement, and well-being.

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Dedication

In addition to my parents Bob and Nanci, my brother Rick, and my many lifelong friends from childhood, this dissertation is dedicated to two very special people in my life. First, my wonderful, loving wife, Katrina Schaefer, who has sacrificed so much in time and treasure to make this dream possible. My dedication to you is in two parts, the first dedication is to recognize your immeasurable support and selflessness in helping me to realize a lifelong dream. The second is to express my dedication of loving gratitude to you in return. The days of being an academic widow are done, and it is time for us to look forward at the road that lies ahead. As your mom (and Billie Holliday) would say: I love you, just you and I, forever and a day.

Second, I joyfully owe an enormous, if not bottomless debt of gratitude to Susan Steinbrecher. Your leadership, as well as your friendship and steadfast belief in me, is the biggest reason that I was able to realize this accomplishment. I say this not to take anything away my own hard work and tenacity to reach the goal, but rather, as recognition of a very simple yet powerful truth: that few things make a difference in this world more than an amazing leader. Although leadership competencies are largely learned, you are certain proof to the whole world that the very best leaders among us, arise first from the greatest human beings.

Acknowledgements

I would like to sincerely thank my dissertation committee chair Dr. William Disch for his persistent optimism and encouragement through thick and thin and numerous manuscript reviews. I have learned so much from our evening conference calls, and have gained tremendously from your wisdom, knowledge, and experience. I also wish to thank Dr. Tom Diamond for his patience in sticking with me, and for his helpful advice during the proposal stage in particular. Dr. Diamond's leadership at Walden University over the years has inspired so many students—especially me—to confidently pursue their passion for the world of industrial-organizational psychology. Finally, I am forever grateful for the tremendous and tireless efforts of Dr. Vincent Fortunato. His mentorship and guidance have been cathartic, and a significant part of my development and continual improvement as a student, writer, and budding scholar is because of his instruction. I could not have completed this long and labyrinthine journey without his help.

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Chapter 1: Introduction to the Study

Background

In recent years, organizations have faced increased challenges in finding leaders who can motivate, inspire, and connect with employees during times of change and uncertainty (Caldwell & Dixon, 2010; Steinbrecher & Bennett, 2003). To address this challenge, organizational executives and human resource and development professionals have readily invested in emotional intelligence (EI) and transformational leadership training and development to expand the acumen and skill set of leadership teams (Srivastava & Bharamanaikar, 2004), increase employee motivation, and to improve job performance (Lam & O'Higgins, 2012; Ybarra, Rees, Kross, & Sanchez-Burks, 2011). The ability of organizational leaders to manage the emotional climate of the workplace effectively, including the ability to manage the intensity of their own emotions in response to difficult or even crisis situations, is crucial for influencing positive work outcomes, such as employee performance, job satisfaction, customer service ratings, and employee emotional health and well-being (Brotheridge & Lee, 2008).

The correlation between the emotional behavior of leaders and workplace outcomes has been widely promoted in books and management publications since the mid 1990s as evidence of the importance of EI (Cooper & Sawaf, 1996; Goleman, 1995, 1998, 2004). One publication even claimed that EI accounts for 58% of job performance outcomes across all industries and job types (Bradberry & Greaves, 2009). Such claims attracted many organizational professionals to invest in measuring EI among employees

and to focus on building high EI leadership teams, especially in work climates such as customer service or law enforcement, where emotional stakes are high (Lindebaum & Cartwright, 2010).

However, despite the enthusiasm and popularity of EI, its relationship with transformational leadership in the scientific literature is mixed, with some studies reporting a positive correlation (Barbuto & Burbach, 2006; Downey, Papageorgiou, & Stough, 2005; Hur, van den Berg, & Wilderom, 2011), and others reporting non-statistically significant findings (Brown, Bryant, & Reilly, 2005; Moss, Ritossa, & Ngu, 2006). Critics have concluded that (a) the EI construct is conceptually invalid (Locke, 2005), (b) the way we currently conceptualize the relationship EI has with transformational leadership is flawed or incomplete (Lindebaum & Cartwright, 2010), or (c) because EI has failed to consistently explain variances in leadership style beyond personality and cognitive ability, the construct is unnecessary and should be discarded (Antonakis, 2003). Despite these criticisms emerging over the past decade (e.g., Brody, 2004; Landy, 2005), encouraging results have begun to emerge in the recent literature. Findings in one meta-analysis of EI and job performance (O'Boyle, Humphrey, Pollack, Hawver, & Story, 2011) included statistically significant correlations with job performance, over the effects of cognitive ability and the Big Five factors of personality. In another meta-analysis of the relationship between EI and transformational leadership, Harms and Credé (2010) found that a statistically significant relationship exists. However, the authors also conveyed a need to address a gap in the research by exploring

moderator variables that may function to clarify the relationship of EI-transformational leadership, with one specific recommendation: to explore the intensity of emotional displays in leaders.

Fiori (2009) offered an important insight as to why the recommendations made by Harms and Credé (2010) are justified in terms of construct validity for ability EI. Fiori contended that measurement of ability EI, specifically the Mayer Salovey Caruso Emotional Intelligence Test or MSCEIT (Mayer, Caruso, & Salovey, 2000a; Mayer, Salovey, & Caruso, 2002) captures only the conscious processing of emotion rather than capturing automatic processes and underlying affective reactions that often determine one's behavior, thereby explaining the mixed outcome results for the MSCEIT in correlational research. As a remedy, Fiori encouraged future researchers to explore the automaticity components of emotion in addition to EI, specifically by including measures of individual differences in affect as possible influencing mechanisms. Fiori proposed a dual-process framework for ability EI, asserting that by testing the conscious processing of emotion, the MSCEIT measures declarative knowledge only, thereby missing the procedural level of appraisal, or what theorists described as the precognitive, evaluative component of affective experiences (Frijda, 1993; Lazarus, 1991). Lab experiments by Winkielman and his colleagues (Winkielman & Berridge, 2004; Winkielman, Berridge, & Wilbarger, 2005), provided additional evidence that affective reactions in participants influence the conscious processing of feelings and alter their behavior and decision-making.

Transformational Leadership

Transformational leadership (Bass, 1985a; Bass, 1999) has been one of the most popular constructs in the leadership research literature since its initial development by Bass in 1985 (Antonakis, Avolio, & Sivasubramaniam, 2003; Hunt, 1999). It is defined as the ability of a leader to motivate, inspire, and empower followers to go beyond current or standard levels of performance, and thus to successfully influence followers to aim efforts toward higher organizational goals and aspirations (Bass & Riggio, 2006). Avolio and Yammarino (2002) defined transformational leadership as a set of actions and behaviors that serve to maximize the performance of followers beyond expected levels, and toward a common cause of the "greater good" (p. xvii). Yammarino (1994) connected the outcomes of transformational leadership with positive psychology and states of well-being, noting that transformational leadership is a process-based relationship that "moves followers gradually from concerns for existence to concerns for achievement and growth" (p. 28). Meta-analytic studies have confirmed potential relationships between transformational leadership and a wide range of outcomes, such as employee motivation, team productivity, and leader effectiveness ratings (Judge & Piccolo, 2004; Lowe, Kroeck, & Sivasubramaniam, 1996).

Emotional Intelligence

I selected the ability-based model of EI for this study. "Ability EI" is defined by Mayer and Salovey (1990) as the set of interpersonal and intrapersonal skills required to perceive (or identify) a range of human emotions accurately, to empathize with the

emotions of others and to facilitate their use effectively, to predict the consequence of emotions accurately, and to manage emotional data to build positive relationships (Mayer et al., 2002; Salovey & Mayer, 1990). It is important to examine the theoretical differences between ability EI and competing theories of EI (e.g., Bar-On, 1997; Boyatzis, Goleman, & Rhee, 2000); the two competing EI theories are reviewed and discussed in detail in Chapter 2. Although the competing measures of EI assess many of the same competencies and traits (O'Boyle et al., 2011), the ability-based approach—as opposed to self-reported scales of EI—offers the most promising means for capturing EI as a form of human intelligence (Ashkanasy & Daus, 2005; Daus & Ashkanasy, 2005; Mayer, Salovey, & Caruso, 2008; Roberts, Matthews, & Zeidner, 2010). Ability EI also has the lowest correlation with the Big Five factors of personality compared to self-reported EI (O'Boyle et al., 2011).

Affect Intensity

Affect intensity refers to individual differences in the strength and frequency of emotional response to life situations (Diener, Larsen, Levine, & Emmons, 1985; Larsen & Diener, 1987). The construct includes two independent dimensions: *mood reactivity* (i.e., the stability versus variance of affect) as well as *hedonic tone,* which refers to the valence (i.e. the positive or negative aspects of sensation) as being pleasant or unpleasant. People who are high in affect intensity often report both positive and negative emotional events as being equally strong experiences (Larsen, 2009). Individuals high in affect intensity also experience changes to their moods with greater frequency throughout the

day and with greater variance of intensity than do people reporting low affect intensity (Rubin, Hoyle, & Leary, 2012).

Affect valence has been correlated with numerous organizational outcome variables. For example, Judge and Ilies (2004) found that positive affect related positively to employee job satisfaction. Barsky and Kaplan (2007) found that both negative trait and state affect exhibited positive, statistically significant relationships with increased perceptions of injustice by employees. In Rhoades, Arnold, and Jay (2001), the affect intensity scores of employees predicted successful conflict resolution, mediated by mood state with individuals high in positive affect intensity showing greater concern for others, more motivation for collaboration and problem solving than individuals low in positive affect intensity.

Individual differences in affect arousal and valence may influence the way leaders respond to workplace stressors and thus have a substantial impact on their behavior and choice of leadership style. Transformational leaders are described in Bono et al. (2007) as functioning as stress buffers, creating a consistently positive environment that diminishes the stress effects of customer-related emotional regulation demands. Reducing the need for employees to regulate emotion is meaningful because once regulation demand occurs, the stress effects last for several hours (Bono et al., 2007).

In sum, organizational professionals are continuing to view EI as an important driver of desired leadership outcomes (Rajah, Song, & Arvey, 2011), which may be viewed as justified given the recent meta-analyses on EI and transformational leadership

(Harms & Credé, 2010), and EI and job performance (O'Boyle et al., 2011). However, because of the wide diversity of EI measures, and the less than scientific claims that continue to be made about EI (see the review by Mayer, Salovey, Caruso, & Cherkasskiy, 2011), what is known about EI and its impact on leadership pales compared to what remains unknown. One of the identified areas of research focus—and a gap in the literature—is to explore moderator variables that will provide new and useful information about the nature of emotionally intelligent behavior and its long theorized association with leadership.

Statement of the Problem

The insufficient number of moderator studies on record (Lindebaum & Cartwright, 2011) is a problem, as it prevents a deeper understanding of the conditions in which EI functions as a consistent predictor of leadership outcomes. The lack of a unified construct of EI (Cherniss, 2010) poses an additional and related problem, for the wide number of EI definitions and measures has led to strong criticism about the efficacy of EI as a meaningful and psychometrically sound construct (Rajah et al., 2011), making it especially difficult to generalize meta-analytic findings between EI and hypothesized outcome measures (Joseph & Newman, 2010; Harms & Credé, 2011; O'Boyle et al., 2011). Finally, the inability of current EI measures to consistently predict leadership behavior has created an additional applied problem for human resource professionals who seek to use measures of EI as a part of their leadership coaching and development efforts (Blattner & Bacigalupo, 2007; Eichmann, 2009).

Scholars have suggested that future research address these problems by examining moderators of the EI-transformational leadership relationship (Harms & Credé, 2011; Lindebaum & Cartwright 2011) and uncovering new ways to potentially improve the measurement of ability EI in the future by moving beyond testing declarative channels of emotional knowledge (Fiori, 2009). Affect intensity offers a representation of how individuals with different affective dispositions are more likely to react in real, emotionally charged workplace situations (Fiori & Antonakis, 2011). The identification of statistically significant moderation improves the external validity of the predictor variable (Baron & Kenny, 1986). Therefore, a statistically significant finding that affect intensity moderates the relationship between EI and transformational leadership would provide valuable evidence in support of critical arguments that current ability EI instrumentation measures declarative knowledge of emotion (Fiori, 2009), as opposed to predicting how emotional tasks are actually conducted by individuals in the moment of action (Brody, 2004).

Purpose of the Study

The purpose of this research was to understand the theorized relationships between emotions and leadership better (Ashkanasy & Humphrey, 2011; Lam & O'Higgins, 2012) by exploring whether affect intensity moderates the relationship between ability EI and transformational leadership. An additional, related purpose was to provide scholars with information about the potential use of affect intensity as a means for addressing the problem of current limitations of ability EI measurement identified in

Fiori (2009). If affect intensity is shown to moderate ability EI and transformational leadership, it may provide useful information on the way leaders perceive, use, understand, and manage their emotions. This non-experimental study used quantitative data to solve the identified problems by exploring how affect intensity scores in leader subjects varied given different levels of EI and transformational leadership. A research design model is shown in Figure 1 below.

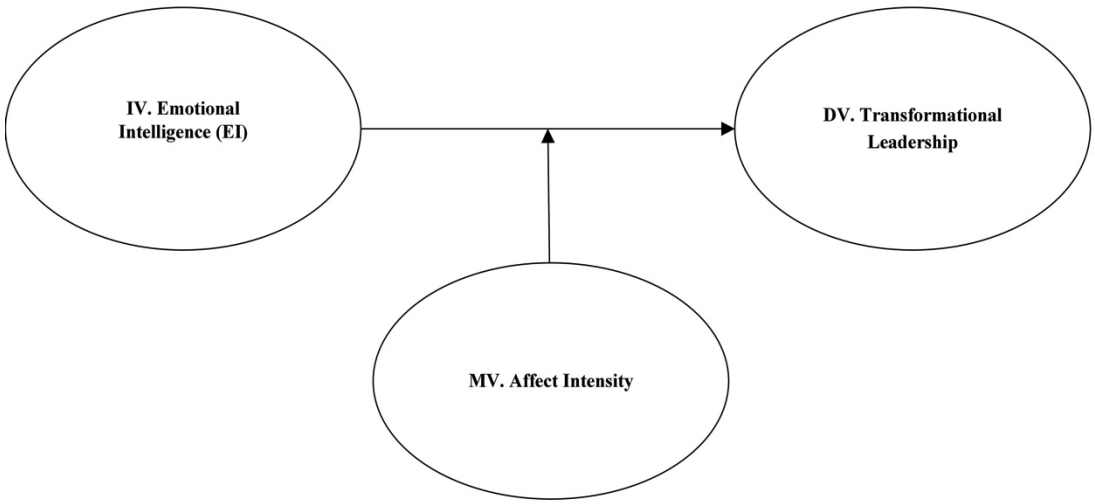

Figure 1. Moderator design model.

Research Questions and Hypotheses

This study was guided by the following research questions and hypotheses:

RQ1: What is the nature of the relationship between EI (total scale and subscale) and total transformational leadership scores?

Null hypothesis ($H_0$1): EI will not relate positively to transformational leadership.

Research hypothesis (*H*a1): EI will relate positively to transformational leadership.

RQ2: Does affect intensity moderate the relationship between EI (total scale and subscale) and total transformational leadership scores?

Null hypothesis ($H_0$2): affect intensity will not moderate the relationship between EI and transformational leadership.

Research hypothesis (*H*a2): affect intensity will moderate the relationship between EI and transformational leadership.

Theoretical Framework

Transformational leadership is defined in this study as the ability of a leader to motivate, inspire, and empower followers to go beyond current or standard levels of performance, and thus to successfully influence followers to direct their efforts toward higher organizational goals and aspirations (Bass & Riggio, 2006). The dominant theory of transformational leadership is the full-range leadership (FRL) model proposed by Bass and his colleagues (Avolio & Bass, 2004; Bass & Riggio, 2006). Bass' theory was based upon previous scholarship related to charismatic and transformational theories of leadership (Burns, 1978; House, 1977). The main tenet of FRL theory is that leader effectiveness hinges upon the quality of the relationship between leader and follower (Bass, 1985a). The dyadic relationship is believed to increase in effectiveness the more the leader empowers the employee on an individual basis as fulfillment of the employee’s emotional as well as intellectual needs (Bass & Avolio, 1994; Kuhnert, 1994). FRL

theory also proposes that transformational leadership is distinct from other leadership styles in that it leads to the highest possible levels of engagement and additional, voluntary effort from the follower, or to what Bass referred as “quantum leaps of performance” (Bass, 1985b, p. 27).

Ability-based EI (Mayer et al., 2002; Salovey & Mayer, 1990) is defined as a type of human intelligence consisting of four distinct factors or branches: (a) identifying and perceiving emotions accurately, (b) facilitating their use, (c) understanding and predicting the consequences and outcomes of emotions, and (d) effectively managing emotions to build positive relationships. The proposition of Salovey and Mayer’s theory of EI is that what distinguishes highly intelligent emotional behavior from less intelligent emotional behavior is the degree to which it is socially adaptive; high EI predicts surviving and thriving at both the intrapersonal and interpersonal levels of analysis (Salovey & Mayer, 1990).

EI theory is diverse and complex, and is best explained as consisting of two distinct theoretical frameworks of EI, ability-based EI and mixed-model EI, which, in turn, inform distinct categories of measurement (see Daus & Ashkanasy, 2005; Joseph & Newman, 2010; O'Boyle et al., 2011). The ability-based model of Mayer and Salovey (Mayer et al., 2002; Salovey & Mayer, 1990) represents the first theory, and it provides the theoretical foundation for EI measurement in this study. The two distinct theories of EI in the literature and the way each are measured are discussed in Chapter 2.

Affect intensity refers to individual differences in the strength and frequency of emotional response to life situations (Diener, Larsen, et al., 1985; Larsen & Diener, 1987). The construct includes the variability of emotional reactivity, as well as the valence of emotion. The arousal regulation theory of affect intensity was proposed by Larsen and his colleagues (Larsen, 1984; Larsen & Diener, 1987). Its three main tenets are that (a) organisms seek equilibrium within a natural range of high/low arousal level to maintain optimal functioning (Hebb, 1955); (b) each individual differs in his/her baseline level of affect arousal, which drives behavior (Eysenck, 1967); and (c) individual differences in affect experience can be best understood through two orthogonal dimensions of valence and intensity (arousal level), as indicated by foundational research on the structure of human affect (Russell, 1978).

Nature of the Study

This study used a nonexperimental quantitative survey methodology to examine the relationship between EI and transformational leadership (the independent and dependent variable respectively), with affect intensity as a moderator of this relationship. Affect intensity was measured using the Affect Intensity Measure, or AIM (Larsen & Diener, 1987). Overall EI and branch score EI, in addition to total EI (EIQ), were measured using the MSCEIT (Mayer et al., 2002). The inclusion of the four branches (factors) of the MSCEIT is based on the analysis of Fiori and Antonakis (2011), who recommended each branch be considered separately when comparing the MSCEIT scores to other variables. Total transformational leadership scores were measured using the 20

questions on the Multifactor Leadership Questionnaire (MLQ; Avolio & Bass, 2004) related to the transformational leadership style. The MLQ-5X is a multirater instrument, consisting of self-reported ratings and the ratings of others (bosses, peers, and direct reports). However, my study focused on leaders' self-reported transformational leadership.

The population consisted of a convenience sample of participants in a supervisory role in the hospitality industry. The relationship between EI and transformational leadership was analyzed using Pearson's Product-Moment correlation. Hierarchical regression was used to test whether affect intensity moderated the EI – transformational regression relationship (Baron & Kenny, 1986). Details provided in Chapter 3 include the design methodology, data collection, participant demographics, target population, and the validity and reliability of all instruments.

Definitions

Affect. Affect refers to experiences of lasting feeling, which contain the bi-polar characteristic of valence (positive/negative), and levels (high/low) of arousal intensity (Weiss & Cropanzano, 1996). These experiences represent either state affect (mood) or trait affect. From the trait view, affect is a stable dispositional tendency to evaluate events as either pleasant or unpleasant (Gooty, Connelly, Griffith, & Gupta, 2010). Affect experience may be longer lasting than the discrete emotional experiences which arise as a result (Frijda, 1993). Affect is distinguishable from mood and emotion by merit of being

"the irreducible aspect that gives feelings their emotional, noncognitive character" (Frijda, 1993, p. 383).

Affect intensity. Affect intensity refers to individual differences in the strength and frequency of emotional response to life situations (Diener, Larsen, et al., 1985; Larsen & Diener, 1987). The construct includes the variability of emotional reactivity, as well as the valence (i.e., positive or negative aspects) of emotional experience.

Emotion. Plutchick (1994) described four different categories of emotional theory, each leading to a multitude of definitions: (1) motivational, (2) psychoanalytic, (3) evolutionary, and (4) cognitive. For the sake of parsimony, the cognitive framework is employed, using the definitional categories from Frijda (1993) as a representation. Emotions are experiences that begin with an affective state (positive/negative), triggering appraisal processes that incorporate both automatic and cognizant levels of analysis, including physiological changes and a state of action readiness. Lastly, emotions contain an external context in which an object or event exists as an anchor and focal point. "One is happy about something, angry at someone, afraid of something" (Frijda, 1993, p. 381).

Emotional intelligence (EI). EI refers to the ability-based model of EI described by Salovey and Mayer (1990). The ability-based EI model is defined as a type of human intelligence consisting of interpersonal skills and abilities required to (1) identify and perceive emotions accurately, (2) facilitate their use, (3) predict the consequences and outcomes of emotions, and (4) to effectively manage emotional data to build positive relationships (Mayer et al., 2002).

Emotional labor. The effort or labor required within the individual to suppress or induce feelings in order to match and sustain a desired state (Hochschild, 1983/2003). Humphrey (2012) defined emotional labor in a leadership context as being set of behavior tactics used by leaders to establish better emotional connections and relationships with employees. The three tactics of emotional labor are surface acting, deep acting, and genuine emotional labor, with leaders high in emotional intelligence being able to engage in more genuine forms of emotional labor, due to the ease by which the task can be performed (Humphrey, 2012).

Emotional regulation. Emotional regulation describes both the internal action of regulating one's own emotion, and the action of assisting or facilitating emotions in others (Mayer et al., 2002). It is defined by Gross (1998) through a temporal process model beginning with emotional cues (input), individual response tendencies (via antecedent and response-focused processing), and emotional expression (output). Emotional regulation is a tactical component of the *emotional management* factor of the ability-based EI model (Mayer et al., 2002). In this context, the degree to which regulation is difficult or easy to conduct refers to the amount of emotional labor required, which is theoretically a measure of emotional intellect. The higher one's emotional management factor score is, the less emotional labor is required (Mayer et al., 2002). The less labor required, the easier the regulation task is, and the more likely another (employee, customer, client, etc.) will perceive the individual's emotional expressions as genuine and authentic (Hochschild, 1983/2003; Humphrey 2012).

Full range leadership (FRL) model. A model (Bass, 1985) which defines leadership through a continuum of behavior from active to passive, through three distinct classes or styles of leadership (transformational, transactional, and nontransactional), including associated dimensions (sub-scales) within each class. FRL behavior is measured by the Multifactor Leadership Questionnaire, or MLQ-5X (Bass & Avolio, 2004).

Hedonic tone. The evaluative aspect of human feeling with respect to its ratio of pleasantness and unpleasantness, or valence (Johnson, 1999). Although hedonic tone includes the evaluation of all sensory stimuli, in this study it refers to the evaluative aspect of affect, mood, and emotion as having positive and negative aspects (Larsen & Diener, 1987).

Mood. A condition of affect that is typically longer in duration than emotional states, but lower in intensity and level of arousal (Frijda, 1993). Mood states are differentiated from emotions by a lack of an object or contextual purpose (Lazarus, 1991). Whereas moods are likely to have causal antecedents, the phenomenal, subjective experience of mood typically lacks (i.e., does not require) an underlying causal factor for its emergence (Frijda, 1993).

Transformational leadership. Defined as the ability of a leader to motivate, inspire, and empower followers to go beyond current or standard levels of performance, and thus to successfully influence followers to aim their efforts toward higher organizational goals and aspirations. This class of leadership within the FRL model

includes the dimensions of Idealized Influence (divided into attributed and behavioral), Individualized Consideration, Inspirational Motivation, and Intellectual Stimulation (Bass & Riggio, 2006).

Assumptions, Limitations, and Delimitations

Assumptions

It is assumed participants in this study answered self-report measures honestly and that the instruments used accurately measured what they purport to measure with the same level of reliability and validity found in previous analyses for the MLQ-5X (Avolio & Bass, 2004), the MSCEIT (Mayer et al., 2002), and the AIM (Larsen, 2009). I assumed that study participants had varying work experiences, personal backgrounds, personality traits, and cognitive abilities that were evenly distributed. In data analysis, it was assumed that the data were normally distributed and that the power analysis (as defined in Chapter 3) provided ample power to detect statistical significance across the hypotheses.

Limitations

Despite recent studies showing that EI can predict leadership and related workplace outcomes after demographic, personality and g-factor are controlled for (O'Boyle et al., 2011; Rossen & Kranzler, 2009), there remain numerous studies in which the incremental validity of EI is low (Bastian, Burns, & Nettelbeck, 2005; Gannon & Ranzijn, 2005). Hence, even though the MSCEIT is a reliable and valid instrument (Mayer, Salovey, and Caruso, 2002), its history of low-to-moderate incremental validity for explaining criterion variables creates a threat to internal validity, placing limits on the

ability to rule out confounding and extraneous variables as an explanation for any statistically significant findings (Wallen & Fraenkel, 2001). Second, convenience sampling also creates a threat to external validity, making it difficult to generalize findings to populations outside the convenience sample. There are two additional considerations related to external validity: the first is related to the purpose of this study, and the second is related to the ethics of organizational research.

The purpose of this study was to explore whether affect intensity functions as a moderator of EI and transformational leadership. The purpose, then, was to discover whether something can happen, not whether it typically happens. Mook (1983) referred to "The distinction between generality of findings and generality of theoretical conclusions" (p. 381), which is vital because the purpose of a large number studies in behavioral science do not include generalizing data results to the real world. Most specifically, the purpose of my research was to offer theoretical validation and feasibility for justifying future research, research whose purpose may then be more expansive in its teleology with respect to real-world generalizability.

The second issue with respect to external validity is the ethics of organizational field research. Studies conducted in active workplaces differ from those done in university lab settings, and sampling must be conducted in a way that is both equitable and ethical, despite limitations related to external validity (Cook & Campbell, 1979). As a result, instead of randomly selecting leaders, all leader subjects within each participating organization are offered equal access to receiving a report on their

leadership style. This may mean that the individual characteristics of managers who choose to participate may be different in statistically significant ways from those managers who opted out of participation. Although random selection of leader participants would reduce sampling error, it also prevents equal access to participation across the entire leadership team of an organization. It is impractical and unethical to limit advantageous or beneficial information to some, but not all persons, in order to obtain a probability sample (Cook & Campbell, 1979). The inclusion of as many experienced leaders as possible (and thus maximizing the amount of leader data collected) avoids the limitations found in some studies (e.g., Krishnan, 2005) that relied on data from a large number of subordinates to rate small pool of executive leaders.

Delimitations

This study has inclusionary delimitations associated with choice of participants and instrumentation, and exclusionary delimitations associated with variables. First, this study was limited to participants who worked within the hospitality industry, spoke English as their primary language, and lived in the United States. Also, qualified leaders must have been in their role for at least 6 months (Avolio & Bass, 2004).

This study has an inclusionary delimitation associated with variables. It examined leaders' EI, affect intensity, and transformational leadership ratings, regardless of their unique work role or job requirements. There is some emerging commentary in the EI literature (Lindebaum & Cartwright, 2011), which suggests high EI can beneficial for some, but not all leadership job roles. This concern is offset by selecting a customer-

service-based industry in which high EI and positive affect is—across the enterprise—viewed as desirable and congruent with employee social identity (Ashforth & Humphrey, 1993). Additionally, there is some indication (Brotheridge & Grandey, 2002) that leaders operating in an intense customer-service-based environment perform emotional labor tasks at rates close to their employees. This understanding of the emotion-laden context of leadership in the workplace is an important consideration in the selection of a purposive sample for field research, which suffers from lower power and higher Type II errors in detecting moderator effects compared with experimental designs (McClelland & Judd, 1993).

Instrumentation choices also carried exclusionary delimitations as well. The selection of the MSCEIT was based on theoretical assertions about the efficacy of ability-based EI over self-reported trait EI in terms of validity and reliability (Mayer et al., 2011). The selection of an ability test of EI over one of the self-reported options mitigated error due to common method variance (CMV), which has been identified as problematic in studies between self-report EI and transformational leadership, given that the MLQ-5X is also self-report (Lindebaum & Cartwright, 2010).

The choice of the AIM to measure affect intensity was based on its long-standing validity and reliability over other measures of affect intensity (Larsen, 2009). The AIM was selected over assessments measuring mood states and affect valence only, such as the Positive and Negative Affect Scale (PANAS, Watson, Clark, & Tellegen, 1988), which were excluded because they did not fit the theoretical criteria, criteria that necessarily

included both dimensions of affect arousal and valence. Consequently, in addition to the reliability and validity of the AIM, this exclusion of other instruments was based on the long-standing theory of affect in psychology: the convergent validity of arousal and valence as a two-dimensional framework for affect (Russell, 1978). This premise underpinned Larsen and Diener's arousal regulation theory (Larsen & Diener, 1987), which, in turn, informed the unique basis for development of the AIM.

Significance of the Study

The results of this study will advance current knowledge by testing whether varying levels of affect intensity will attenuate or augment the effects of emotional ability on the social behavior of leaders. The majority of studies using the AIM have focused on its correlation to clinical, psychiatric applications (Flett & Hewitt, 1995; Henry et al., 2008; Nofzinger et al., 1994) and to a lesser extent on consumer marketing and advertising research (Lee, 2010; Moore, 1995; Moore, Harris, & Chen, 1995), thus making the AIM a unique variable measure for this type of study. The AIM has rarely been tested in studies on leadership despite being the most valid, reliable, and widely used measure of affect intensity (Larsen, 2009) based on long-standing theory of affect as a two-dimensional framework of valence and arousal (Russell, 1978). There are also numerous implications for social change for leaders, employees, and Human Resource practitioners in the findings of the study that are discussed in detail in Chapter 5.

More investigation is required to understand the moderation effect that affect intensity may have on leaders of varying levels of EI to build effective interpersonal

relationships with employees. In their review of leadership, affect, and emotions, Gooty et al. (2010) recommended that more empirical tests of affective influence on leadership be conducted, particularly moderator and mediator effects on constructs related to affect and emotion. Damen, van Knippenberg, and van Knippenberg (2008) recommended that future research focus on the intensity of affect arousal in leaders to test the extent to which high arousal displays of affect by leaders are related to the attributions of charismatic leadership by raters. Connelly and Ruark (2010) also called for more empirical research on moderators of leader affect, focusing on variables that may influence leadership style.

Summary and Transition

Questions on the nature of the relationship between EI and transformational leadership, and debates over the rightful future of the EI construct in the scientific literature, continue to be problematic. The results of affect intensity differences between leaders may provide new and useful information about how leaders use emotion in workplace situations, based on the distinguishing characteristics of automatic versus conscious processing of emotion. The purpose of this study was to examine whether affect intensity moderates the relationship between EI and transformational leadership. If a leader's ability-based EI and affect intensity are shown to be connected to greater levels of employee inspiration and motivation associated with transformational leadership, then the return on an organization's investments in testing, coaching, and development efforts will prove to be more valuable.

Chapter 2 includes a detailed and in-depth analysis of the literature related to the conceptualization, measurement, and development of the constructs of transformational leadership, EI, and affect intensity respectively. It expands on the identified gaps in the literature, revealing precisely how the current study addresses significant areas of research opportunity. Chapter 3 presents the research design and methods used to address the research questions, and pertinent issues related to data collection procedures, target population, sample demographics, and instrumentation. Chapter 4 presents the findings from this study. Chapter 5 is devoted to a summarization of all conclusions, limitations, the implications for positive social change, and recommendations for further research.

Chapter 2: Literature Review

Introduction

Researchers have been testing the theorized correlation between EI and transformational leadership for more than a decade (e.g., Sosik & Megerian, 1999), with interest in this subject continuing to increase of late (e.g., Cavazotte, Moreno, & Hickmann, 2012; Domerchie, 2011; Føllesdal & Hagtvet, 2013; Hur et al., 2011; Kirkland, 2011; Lam & O'Higgins, 2012). However, during this span of time, numerous studies have shown only partial support for hypotheses correlating EI with transformational leadership (e.g., BeShears, 2004; Clarke, 2010; Leban & Zulauf, 2004; Palmer, Walls, Burgess, & Stough, 2001), whereas others showed no statistically significant relationships (e.g., Brown et al., 2005; Lindebaum & Cartwright, 2010; Weinberger, 2009). The history of inconsistent findings has led scholars to debate the theorized relationship between EI and transformational leadership (Antonakis, Ashkanasy, & Dasborough, 2009), to question the validity of EI as a useful construct of intelligence (Fiori & Antonakis, 2011), or to conclude that EI abilities are not necessarily advantageous for leaders in all industries and job roles (Lindebaum & Cartwright, 2011).

To address specific concerns about the way ability EI has been construed by Mayer and Salovey (1997), Fiori (2009) proposed a dual-process framework of ability EI aimed at providing potential solutions for future research. In order to test Fiori's framework, I examined whether affect intensity moderated the relationship between ability EI and transformational leadership. The following chapter provides a detailed

overview of the theory and literature relevant to the three key constructs in my study, including their conceptualization, measurement, historical development, and a review of the empirical literature.

Literature Search Strategy

This review involved the use of online library resources, local university libraries, document delivery services, and the direct websites of academic publishers and textbook resellers to secure older materials. Databases searched included: Academic Search Premier, Business Source Complete, PsycINFO, ScienceDirect, and SocINDEX. Also consulted for dissertation manuscripts was the ProQuest Dissertation and Theses archive.

Key terms that fit the immediate subject matter domains were used to define the foundation of this literature review:all combinations and permutations of *transformational leadership*, *emotional intelligence*, and *affect intensity*. Terms used in addition (and separately) were the the measurement descriptors *MSCEIT*, *MLQ*, and *AIM* to collect the most relevant and specific research data possible. The literature for the operationalized variables of interest began in 1985 for transformational leadership, 1990 for ability-based EI, and 1984 for affect intensity measure. This directed the focal point of the temporal search strategy for each construct respectively, with an emphasis on articles published within the last 10 years. This does not include historical reviews or searches related to theory for transformational and charismatic leadership, emotion, and affect in the workplace, which were not filtered or limited by timeframe. I obtained and

directly examined secondary source citations of importance located within any primary research articles.

With filters for database duplications, the search produced 4,334 results for transformational leadership; 7,786 results for EI; and 129 sources with *transformational leadership* and *EI* combined. Further reducing the scope with a peer-review limiter, the more granular search of *leader*, emot*, intell**, and *affect** yielded 55 results, followed by a manual selection of 41 articles of relevance. Only one study included both the AIM and the MSCEIT measures together (Rash, 2011), although it was not a study on leadership. The only paper that involved all three variables together was a conference paper (Jin, Seo, & Shapiro, 2008) that focused on whether emotional intensity was a moderator of EI and transformational leadership, using mood data collected from college students. Detailed discussion of the selected peer-reviewed articles, dissertations, and other papers appears within the empirical review section of this chapter.

Transformational Leadership

Theoretical Foundation

Historical background. The earliest attempt to define the qualities now understood as transformational leadership was through the concept of the charismatic leader that Max Weber (1922/1946) described via his representation of the charismatic hero or *transformer* figure, a leader archetype endowed with extraordinary powers to influence followers outside the context of formalized power and authority. It is from Weber's concept of the leader as a born entity and phenomenon that House (1977)

derived his theory of charismatic leadership. House was the first to apply Weber's concept of leadership charisma within the context of formal organizational research. House viewed charismatic leadership as an innate trait, with the charismatic leader representing a gifted individual imbued with the profound abilities to control and persuade followers. During this same era in the 1970s, Downton (1973) was the first author to explicitly use the terminology *transformational leadership*, by comparing differences between conventional, reforming, and rebellious leaders.

However, the seminal work of James MacGregor Burns (Burns, 1978) was the most important historical starting point for transformational leadership theory. Burns (1978) was the first author to describe the transformational archetype of leadership as being distinct from what he called the transactional, or compliance-based aspect of leading others. Burns asserted that leadership is quintessentially revealed through an ability to leverage one's position as leader to motivate and influence others within the context of a relationship; a relationship in which the goal is to align the satisfaction of motives held by the leader with the motives of the follower.

The ability of a leader to leverage a positive response from followers, as opposed to being effective by the fortune of genetic inheritance, is a crucial distinction in Burns' (1978) work. Although not discounting the existence of innate biological forces, Burns did not focus on the ontological conditions and underlying personality traits—those cultural, historical, psychological, or technological conditions—that may or may not give rise to great leaders. The phenomenon behind the indispensable man (Flaherty, 1999;

Rothschild, 2008), or the leader of innate character similar to Weber's (1922/1946) description almost a century earlier, is not as important for Burns as what behaviors and tactics said indispensible man chooses to engage in. The driving consideration for Burns' epistemology is the more pragmatic view that leadership emergence is ubiquitous throughout social systems of all types, be they formal or informal, political or non-political, a view reinforced years later by Conger (1989) in his assertion that leadership is not a magical ability, nor is it limited to the few. For Burns (1978), because socio-organizational systems generally require leadership in order to function efficiently and effectively, leaders naturally emerge, primarily out of functional necessity rather than genetic qualification or titles that bestow power. Burns intentionally distinguished between leadership and the personal attributes of power, stating, "All leaders are actual or potential power holders, but not all power holders are leaders" (p. 18). The success of any given leader is ultimately based on specific skills and abilities used to successfully leverage influence upon people and convince them to follow; to successfully change the motives of others through influence as opposed to coercion (Yukl, 2006). Hence the true nature of effective leadership for Burns is viewed as transformational (i.e., change-oriented) with respect to elevating people as a moral imperative. Burns' moral proposition that effective leaders treat people with dignity represented a philosophical concept of leadership that had yet to be operationalized into a pragmatic theory (Yukl, 2006).

The approach by Burns to define leadership as a moral proposition was not only novel compared to the ontological or so-called great-man attributes of early leadership philosophy (Bass, 1990a; Carlyle, 1841), but it also differed from previous mid-20th century attempts to frame leadership through its external sociological bases of power (French & Raven, 1959; Raven & French, 1958), or to map the intricate and subtle nuances of leader-member exchanges (Dansereau, Graen, & Haga, 1975). Burns was concerned with describing the fundamental outcomes vis-a-vis the uncanny abilities of leaders to wield positive influence effectively on followers beyond the normal constraints imposed by positive rewards and negative consequences. Burns (1978) described the classic radical behaviorist approach to behavior change, as having minimized the powerful role that internal forces such as motive, choice, and free will, play in the relationship between leaders and followers.

Seeing the world of leadership through the epistemological and sociological lens of a historian (Northouse, 2009), Burns (1978) documented the forms and expressions of leadership, mainly within the political sphere, throughout world history. However, his analysis clearly described specific behaviors and tactics used by leaders of all types—political or non-political—and the motivational effect these actions had on followers, and thus he became the first author to clearly distinguish between the transformational and transactional leadership classifications (Northouse, 2009). Bass and his colleagues expanded upon Burns' transformational-transactional paradigm and formulated it as part of a full-range continuum and categorization of leadership behavior, which Bass

developed into a comprehensive scientific theory (Bass, 1985a; Bass, 1990a; Bass, 1990b; Bass, 1994, 1997; Bass & Avolio, 1990; Bass & Avolio, 2004; Bass & Riggio, 2006).

Full-range leadership theory. Whereas Burns (1978) originally conceptualized transformational leadership as existing on a continuum with transactional leadership, Bass (1985) conceptualized all aspects of leader behavior as being both distinct categories as well as existing as a continuum or progression of behaviors based on different levels of activity and degrees of effectiveness. Beginning with Bass (1990b; Bass, 1994) , transformational leadership theory became a component of an overall theory of what he referred to as a comprehensive (or full) range of behaviors; behaviors that every leader will end up demonstrating to varying degrees by the nature of the leadership role itself.

Through this multiclass, multidimensional approach, the philosophical underpinning for the FRL theory is not only associated with the political-sociological work of Burns (1978), or with House's (1977) personality-based concept of charisma, but rather, with some of the very first scientific models of leadership established in the mid 20th century (Blake & Mouton, 1964; Stogdill, 1963), in particular, the similarity between these earlier models (e.g., Blake and Mouton's leadership grid) and Bass's concept of individualized consideration (Judge, Woolf, Hurst, & Livingston, 2006). The Ohio State studies, in particular (e.g., Stogdil, 1950), were instrumental in revealing that leadership skill involved not only the ability to drive task completion and to direct behavior, but also

the ability to generate enthusiasm and motivate followers via an authentic interpersonal communication with the leader (Judge, Piccolo, & Ilies, 2004; Yukl, 2006). Bass (1985) represented the factors of consideration and initiation structure within three classes: transformational (consideration of followers' needs), transactional (task and exchange-based initiation), and avoidant/passive, which represents an absence of both types of leader behavior. Bass (1999) admitted that the older concept of consideration is likely to have empirical correlations with transformational leadership, and others have likewise noted the definitional overlap between them (Judge et al., 2006).

Bass' 1985 full-range theory, then, extricated transformational leadership from the framework of Burns's (1978) political and historical epistemology, and applied it to the discipline of behavioral science by classifying leader-to-subordinate behaviors within a set of well-defined factors that can be applied to individual, dyadic, and group levels of analysis (Yammarino, Spangler, & Dubinsky, 1998). Transformational leadership was defined as the ability to motivate followers to go above the call of duty based on their connection with the leader (Bass, 1985). Leaders gain extra effort from followers by raising the level of awareness and importance of goals (which become idealized), motivating followers to transcend behavior of self-interest in favor of the good of the team and organization, and helping followers to realize higher-level needs and strive for them to be manifest vis-à-vis increased performance.

Bass and Avolio (2004) operationalized the transformational leadership class into five dimensions: (a) idealized influence (attributed), which refers to the degree in which

others view the leader as adhering to strong ideals and principles; (b) idealized influence (behavior), which refers to the degree in which a clear and concrete sense of purpose or mission form the basis of the leader's actions; (c) individualized consideration, which is the degree to which the leader pays attention to the unique needs of the individual follower, mentoring them toward higher potential, self-actualization, and achieving inner fulfillment; (d) intellectual stimulation, which represents the leader's ability to appeal to the logic and reasoning skills of the follower in order to raise their energy and level of interest, particularly toward innovation, creativity, and problem-solving; and (e) inspirational motivation, which refers to the leader's ability to orient followers toward positive future state thinking with respect to meeting organizational goals, missions, long-term vision states, and ambitious personal accomplishments. By splitting idealized influence into behavioral and attributed aspects, earlier formations of the transformational leadership class went from an initial four dimensions (or the four "I's") to the current five-dimension structure (Bass & Avolio, 2004). There are other ways to depict this split of idealized influence in order to maintain four dimensions, such as by combining both the behavioral and attributed aspects into a single dimension of charisma (Weinberger, 2009).

Transformational leadership is one of three total classes within Bass's full-range leadership theory (Bass, 1985a; Bass, 1999), and is most clearly understood within this context of an inclusive spectrum of behaviors. The transformational class itself was positioned by Bass and his colleagues (Avolio & Bass, 1991; Bass & Riggio, 2006) as the

most effective and active set of behaviors within the full range leadership (FRL) model. The FRL model consists of three distinct classes, arranged from most to least effective in the following order: the transformational leadership class (which represents the dependent variable and focal point of this study), the transactional leadership class, and the passive/avoidant behavior class (often referred to as laissez-faire leadership).

Measurement: The Multifactor Leadership Questionnaire

One of the critical differences between the early two-factor approaches of measuring leadership, such as those described by the early Ohio State leadership body of research (Stogdil, 1950) or Blake and Mouton's (1964) managerial grid, versus the FRL theory of Bass (1985), is that the consideration and initiation structure are not an X and Y axis in the latter. Rather, with FRL, leadership classes are dynamic, representing a wide range of behaviors, styles, and tactics. Arrangement of classes occurs from the least effective to most effective and from the least active to most active, with the frequency of specific behaviors providing the third axis. Avolio, Bass, and Jung (1995) measured their three-class, multidimensional structure via a multi-rater assessment, the Multifactor Leadership Questionnaire (MLQ), which captures all the behaviors of the full-range model. The primary goal of the MLQ from its earliest inception and initial iteration (Bass, 1985a) was to measure empirically the concept of the transformational leader that Burns (1978) depicted, by conducting a series of interviews with executives living in South Africa, in which each participant recalled a specific leader who inspired them to raise their performance beyond expectations and to put aside personal interests in favor of

group or organizational goals. According to Hunt (1999), Bass was fascinated by how closely the South African data resembled not only Burns' depictions of transformational leadership, but also those found in House's (1977) work.

Armed with new data, Bass (1985) tested the first initial framework of the MLQ through his work with military officers. The original MLQ consisted of 45 questions along three dimensions (inspiration, intellectual stimulation, and individualized consideration), with a frequency-based Likert scale for scoring each dimension. Subsequent versions of the MLQ included a fourth dimension (idealized influence), which represented an evolution away from an earlier concept of charismatic leadership by House (1977) that emphasized control and dominance as leader characteristics. Bass and Riggio (2006) remarked that despite the many similarities between MLQ items related to transformational leadership and what other authors have called charismatic leadership (Conger, 1988; Conger, 1994; Conger, 1998; House, 1977), transformational leadership is broader in scope than charismatic leadership. Nevertheless, the relationship between transformational and charismatic leadership is close enough in terms of research categorization that *Leadership Quarterly's* decade synopsis of its published leadership literature, embeds transformational leadership into the neo-charismatic taxonomy (Gardner, Lowe, Moss, Mahoney, & Cogliser, 2010).

Revisions of the MLQ occurred through continual refinement of survey items to improve validity and dimension structure (Bass & Avolio, 1990). Researchers (Antonakis et al., 2003; Judge & Piccolo, 2004) found support for the nine-dimension, three-class

FRL model as measured by the most recent version of the MLQ instrument, the MLQ-5X. Avolio, Bass, and Jung (1995) and Bass and Avolio (1997) previously found evidence from large samples of pooled data (N = 1394 and 1490 respectively) that also supported the nine-dimension FRL model in terms of strong internal consistency and factor loadings.

Findings from several investigations in the late 1990s failed to support the dimensional factor structure of transformational leadership using exploratory and confirmatory factor analysis of the MLQ-5X (Carless, 1998; Tracey & Hinkin, 1998). In her review of data from 1,440 subordinate and 695 managerial participants from the Australian banking industry, Carless (1998) found support for only one broad dimension of transformational behavior as opposed to the expected transformational leadership dimensions of charisma, intellectual stimulation, and individualized consideration. Another review of the MLQ-5X within the hospitality industry likewise indicated no support for five transformational leadership dimensions, but rather, only support for one overall transformational leadership class (Tracey & Hinkin, 1998). In these studies, the findings of a single higher-order factor of transformational leadership was viewed by the respective authors as a reason for calling into question the multi-dimensionality of transformational leadership (Carless, 1998; Tracey & Hinkin, 1998). However, it should be noted that overall transformational leadership and subscale dimensions in the MLQ-5X were then subsequently reexamined and validated by its authors (Avolio, Bass, & Jung, 1999), and in another confirmatory factor analysis (Muenjohn & Armstrong, 2008),

support was found for the full subscale dimensionality of transformational leadership in the MLQ-5X. Muenjohn and Armstrong pointed out some limitations found in previous factor analyses, and concluded that based on their findings, researchers should have confidence using the MLQ-5X to measure the five dimensions of the transformational leadership class.

Additional Theories of Transformational Leadership

Attributional theory of charisma. In the empirical literature on leadership, the concept of *charisma* reflects similar leadership styles and outcomes as Bass' (1985) transformational leadership. For example, according to Conger and Kanungo (1987), the degree of identification followers have with their leader represents a leader's charisma, which in turn predicts the degree of identification followers will have with the organization. House and Podsakoff (1994) viewed charismatic leadership as being synonymous with transformational leadership, and Conger and Kanungo (1998, p. 15) likewise concluded there was "no real difference" between the two theories.

Conceptually, much like transformational leadership, charismatic leadership is moored to the concept of organizational change, but with a focus on the temporal aspect of change: the charismatic leader is one who successfully moves individuals and teams from a status-quo state toward a desired future state, a process that Conger and Kanungo (1987) described as consisting of three stages: environmental assessment, vision formulation, and implementation. These stages are a heuristic representation and are non-linear; that is, the stages do not necessarily fall in sequential order, but are fluid and may

occur simultaneously or even regress as a result of ongoing evaluation by the leader (Conger & Kanungo, 1998). During the first stage (environmental assessment), the leader determines the strengths, challenges, and opportunities existing in the organization, as well as collecting the individual and group-level needs of team members. During the second stage (vision formulation), leaders leverage the information collected from the first state to create an inspired vision. Finally, during the third stage (implementation), the leader implements his or her vision, using motivation and inspiration to influence followers toward pursuing the objectives (Conger & Kanungo, 1987; 1998). Conger (1999) additionally described four motivational outcomes from the perspective of the follower, instead of focusing on outcomes from the perspective of leader behaviors in Bass' (1985a) transformational leadership model. The follower outcomes consist of the way a follower perceives their work, connects with the leader's vision/mission, identifies with others in the group, and achieves a sense of collective effort (Conger, 1999).

Researchers have tested the efficacy of the follower-based framework of Conger and Kanungo's (1998) theory. Den Hartog, De Hoogh, and Keegan (2007) found that when leaders are perceived as charismatic, they increase the sense of belonging that followers have toward one another and the mission of the organization. In another study involving Israeli bank employees (Kark, Shamir, & Chen, 2003), the attribution of charisma in leaders was positively related with follower-leader identification, collective efficacy (belief in the mission), and social identification with the organizational unit. Although these outcomes are similar to those proposed by transformational leadership

theory, Bass and Avolio (1994) argued that charisma is but one component of transformational leadership (i.e., idealized influence), and is therefore a separate, albeit similar, theoretical model of leadership.

Kouzes and Posner's transformational leadership practices. Kouzes and Posner (1987) proposed another theory of transformational leadership, defining transformational leadership through five categories of leadership behaviors or practices: (a) challenging the process, defined as the extent to which the leader takes risks and questions assumptions; (b) inspiring a shared vision, defined as the degree to which the leader espouses an exciting view of the future; (c) enabling others to act, defined as the amount of cooperative and participative decision-making used by the leader; (d) modeling the way, defined as the level to which the leader sets an example for followers, i.e., walk the talk; and (e) encouraging the heart, defined as the use of positive feedback, public recognition and celebration of team achievements (Carless, 2001). Kouzes and Posner (2002) make a strong distinction between the practices and habits of effective leaders, versus indicators such as personality, which they view as a distraction from the focus on the commitments of exemplary leadership, which consist of habits available to every leader as a matter of choice and practice.

Although Bass (1997, p. 130) recognized the work of Kouzes and Posner (1987) as being "one among a number of neocharismatic conceptualizations," this conceptualization has been the basis for research in very few peer-reviewed articles. One peer-reviewed study using the Kouzes and Posner construct of transformational

leadership was a cross-sectional survey of 31 nurse managers and 558 nurses by Meyer et al. (2011). Meyer et al. reported a positive relationship between transformational leadership and nurse satisfaction with their supervisor.

Empirical Review: Transformational Leadership

The popularity of transformational leadership research is reflected in *Leadership Quarterly's* decade review (Gardner et al., 2010), which presented transformational leadership as the single most popular research topic within the neocharismatic leadership category of studies. In another review, more than 10% of all leadership studies (145 of 1,437 articles collected) between 1985 and 2009 had transformational leadership as a core focus (Hiller, DeChurch, Murase, & Doty, 2011). The MLQ has become the near-universal instrument of choice for researchers studying transformational leadership (Hunt, 1999), and has been used with a wide range of participant sample demographics including military leaders and cadets (e.g., Dvir, Eden, Avolio, & Shamir, 2002; Hardy et al., 2010; Olsen, Eid, & Johnsen, 2006); middle- and lower-level managers (e.g., Bruch & Walter, 2007; Conger, 1994; Conger, 1998; Hater & Bass, 1988; Howell & Avolio, 1993) senior- and chief-level executives (e.g., Ling, Simsek, Lubatkin, & Veiga, 2008; Resick, Whitman, Weingarden, & Hiller, 2009; Tikhomirov & Spangler, 2010); and U.S. Presidents and presidential candidates (e.g., Deluga, 1998; Pillai & Williams, 1998; Pillai, Williams, Lowe, & Jung, 2003; Williams, Pillai, Lowe, Jung, & Herst, 2009).

Antecedents of transformational leadership. The emergence of transformational leadership is based not only on individual differences and competencies

of leaders, but also environmental antecedents unique to the organization in which it is measured (De Hoogh, Den Hartog, & Koopman, 2005), including the perceptions and attributes of associates (Felfe & Schyns, 2010). Studies on transformational leadership increased since the turn of the century, with 103 total studies during 2000-2009, compared to 42 total studies from 1985 to 1999 (Hiller et al., 2011). Within this body of literature, some of the most important antecedents of transformational leadership have been the factors of personality, cognitive ability, and socio-emotional competence.

Personality. Personality may be one of the most important antecedents of leadership in the literature. Bono and Judge (2004) found that 12% of articles published on the subject of leadership from 1990 – 2004 included the keyword *personality*. Judge et al. (2002) suggested four factors (extraversion, conscientiousness, openness, and neuroticism) within the Big Five typology to be a fruitful basis for examining the antecedents of leadership, with agreeableness being the least likely predictor.

Regarding transformational leadership specifically, Judge and Bono (2000) provided logical, pragmatic reasoning to support their set of hypotheses that personality factors and transformational leadership are related. For example, the authors proposed that extraversion should relate positively to transformational leadership, because effective leadership requires social skills and the ability to connect with others through active, dramatic expression and verbal acumen, the terms *extraverted* and *charismatic* are synonymous leadership characterizations. Additionally, they argued that agreeableness should relate positively to the individualized consideration dimension of transformational

leadership in particular, because agreeable leaders are more likely to demonstrate empathy toward others' needs and points of view. Judge and Bono found support for their hypotheses that extraversion and agreeableness positively relate to transformational leadership. Openness to experience was also positively and statistically significantly correlated with transformational leadership, but the relationship disappeared when additional predictors were controlled. These authors concluded that although personality does play a role in predicting transformational leadership behaviors, the correlations in their study were "not so large as to indicate that transformational leadership should be considered a trait theory" (p. 760).

In a meta-analysis 4 years later, Bono and Judge (2004) found that personality factors were related to three dimensions of transformational leadership. Extraversion was estimated to correlate positively with idealized influence ($\rho = .22$), whereas neuroticism was negatively correlated with idealized influence ($\rho = -.17$). Similar correlations with extraversion (positive) and neuroticism (negative) were found with intellectual stimulation and individualized consideration. However, no correlations were found between openness to experience, agreeableness, or conscientiousness and any transformational leadership dimension. Bono and Judge (2004) also examined the relationships between overall (composite) transformational leadership and personality traits, finding a positive estimated population correlation between transformational leadership and extraversion ($\rho = .24$),conscientiousness ($\rho = .13$), agreeableness ($\rho = .14$), and openness to experience ($\rho = .14$), leading the authors to conclude that extraversion

was the most important antecedent of transformational leadership to explore in future research. Bono and Judge proposed that transformational leadership may not be as strongly linked to Big Five personality traits as some have previously believed, but instead may be related to other dispositional antecedents not captured by personality. This proposition is similar to an earlier statement that Bass (1998) made: "When it comes to predicting transformational leadership and its components, there is no shortage of personality expectations. However, the empirical support has been spotty" (p. 122). In a field study focused on the hospitality industry (Zopiatis & Constanti, 2012), transformational leadership was found to be positively associated with extraversion, openness, and conscientiousness; however, transformational leadership was not negatively correlated with neuroticism as hypothesized. Zopiatis and Constanti (2012) also found that extraversion, openness, and conscientiousness explained 47.2% of transformational leadership in their sample.

Cognitive ability. There is plenty of theoretical speculation that intelligent leaders will demonstrate more transformational leadership behaviors then their less intelligent peers. Avolio (1999) expected intelligence to be an asset in helping leaders increase levels of employee engagement through intellectual stimulation, whereas House (1977) and Conger and Kanungo (1988) proposed that charismatic leaders relied on their cognitive abilities to create more compelling strategies and visions than less charismatic leaders. Wofford and Goodwin (1994) offered two specific propositions for how cognitive ability may function as an antecedent: (a) transformational leaders have a

higher minimum level of cognitive ability than transactional leaders, and (b) compared with transactional leaders, transformational leaders have a greater richness for schema (i.e., verbal intelligence). Despite numerous suggestions that intelligence predicts transformational leadership behavior, Cavazotte, Moreno, and Hickman (2012) remarked that very few empirical studies have focused on the cognitive ability–transformational leadership correlation. In their structural equation model, Cavazotte et al. found that overall transformational leadership behavior correlated positively with scores on the GMAT ($\gamma = .33$, $p < .01$).

In a longitudinal study on adolescent IQ and transformational leadership as an adult, Reichard et al. (2011) compared participant IQ scores at age 17 with transformational leadership ratings at age 29. The result was not statistically significant ($r = .09$, $p > .05$). They also found limited support in their sample for cognitive ability to predict leadership emergence later in life, and no support for predicting managerial level occupational roles in later adult work life. Nguyen (2002) found a small but statistically significant positive correction ($r = .16$) between transformational leadership and Wonderlic IQ test scores, and Beshears (2004) found a statistically non-significant correlation between these variables ($r = .12$, ns), with cognitive ability explaining less than 1% of overall transformational leadership. Although cognitive ability does appear useful in predicting leadership emergence in general (Taggar, Hackett, & Saha, 1999), it may not be the best predictor of whether occupant leaders adopt a more transformational versus transactional style of leading. In sum, statistically significant relationships

between cognitive ability and transformational leadership have yet to be established consistently across the literature, largely from a lack of studies.

Socio-emotional competency. Riggio and Reichard (2008) proposed socio-emotional competency as an antecedent of transformational leadership. According to Riggio and Reichard, leaders must be competent in reading and interpreting the social cues of followers and adjust their behavior to align with the emotional needs of the follower. Riggio and Reichard's proposition mirrors the initial writings of Bass (1985), who theorized that transformational leaders are able to read emotional cues and adjust their behavior as a means for gaining greater follower influence. The ability of a leader to demonstrate positive affect and optimism during organizational change efforts is a necessary component of inspiring and empowering others to view their work positively. Bommer (2004) found that the demonstration of feelings of futility and cynicism about organizational change by leaders was negatively correlated with transformational leadership behavior (r = -.29; p < .01). Casimir and Ng (2010) proposed that socio-emotional competencies include the ability to encourage followers in challenging times, maintain positive relationships characterized by trust, show appreciation of the ideas of others, and be considerate of the unique needs of each individual. According to Casimir and Ng, the most important feature of socio-emotional competency is the ability of the leader to engage in empathic support. The latter refers to showing concern for the welfare of followers and expressing sincere appreciation for their efforts. The single most important—and certainly the most prevalent—socio-emotional antecedent of

transformational leadership examined in the literature is EI. As the focal point of my study, an extensive examination of the empirical literature discussing EI as an antecedent of transformational leadership is presented later in this chapter, immediately following the theoretical review of EI.

Consequences of transformational leadership. Meta-analytic studies have confirmed a general association between transformational leadership and a wide range of individual and group-level outcomes (DeGroot, Kiker, & Cross, 2000; Judge & Piccolo, 2004). In a meta-analysis, Judge and Piccolo (2004) found that follower job satisfaction and follower motivation were the strongest outcomes associated with transformational leadership, followed by leader job performance and group or organizational performance. DeGroot et al. (2000) reported similar findings, with follower job satisfaction, leader performance, and follower effort being the strongest outcomes.

Follower job satisfaction. Bass (1985) theorized that transformational leadership was a more effective style than transactional leadership at achieving follower satisfaction with their work roles by (a) expanding the scope of follower job needs, (b) increasing follower self-efficacy and level of confidence in the ability to perform tasks, and (c) elevating followers' subjective assessment of probability of success in goal achievement. Bass and Riggio (2006) proposed that transformational leaders increase the job satisfaction of followers by gaining their trust through consistent acts of personal integrity, fair and equitable treatment of followers, and by demonstrating faith in the ability of followers to succeed. The positive relationship between transformational

leadership and follower job satisfaction has been supported in the empirical literature. In a study of 122 staff nurses and their managers (Medley & Larochelle, 1995), transformational leadership style was shown to correlate positively with work satisfaction (r = .40; p < .001). In a study by Riaz and Haider (2010) in which they measured job satisfaction separately from career satisfaction, both transformational and transactional leadership predicted job satisfaction, whereas only transformational leadership predicted career satisfaction. Meta-analytic data also supports the positive relationship between transformational leadership and follower satisfaction across the body of literature (DeGroot et al., 2000; Judge & Piccolo, 2004). Using a broad classification of charisma, DeGroot et al. (2000) reported a positive correlation between charismatic leadership and follower job satisfaction of .77 (k = 14; N = 3,832). Four years later, Judge and Piccolo also showed a positive correlation between transformational leadership and follower satisfaction of .58 (k = 18; N = 5,279). Based upon the charismatic leadership focus found in the DeGroot et al. (2000) meta-analysis, Judge and Piccolo (2004) also compared differences between charismatic and transformational leadership, finding that the differences in validity was statistically non-significant.

Recent studies also show a trend toward investigating the transformational leadership-follower job satisfaction correlation in non-Western organizational cultures. In a study of 10 Ethiopian leather manufacturing companies, transformational leadership, specifically the dimensions of idealized influence and individualized consideration, explained 40.6% of the variance in subordinate job satisfaction (Shibru & Darshan,

2011). In a study of a Chinese hospital organization, Wang, Chontawan, and Nantsupawat (2012) also found a statistically significant positive correlation ($r = .56$, $p < .001$) between the transformational leadership ratings of nurse managers and follower job satisfaction. In a study of an oil company in Libya by Zahari and Ali Shurbagi (2012), culture variables had as much influence on worker job satisfaction ratings as a transformational style of leadership by their supervisor. Zahari and Ali Shurbagi proposed that challenges related to economic development and political uncertainty in Libya likely contributed to stability factors such as basic benefits to rate highly as job satisfaction criteria for employees. The authors also proposed that the more a Libyan organization relies on a hierarchical rather than a clan-based affiliation, the more likely it is that transformational leaders will impact job satisfaction.

Follower motivation. Scholars have theorized that transformational leadership behavior provides motivation to followers at both dyadic and group levels (Bass & Avolio, 1990; Bass & Avolio, 2004; Bass & Riggio, 2006). However, the association between transformational leadership and motivation appears to be context dependent. Hardy and colleagues (2010) conducted a two-part study of the association between transformational leader behaviors and the completion of training by 484 Marine Commando recruits based in the UK. Their discriminant function analyses indicated that transformational leadership behaviors accounted for differences between the training completion and withdrawal groups, χ^2 (7) = 22.36, $p = .002$. However, their second experimental study reveals an important facet of the motivational effects of leadership

behavior. This second (training intervention) study focused on the effects of transformational leadership by non-commissioned officers on 152 troops in an experimental group (N = 85) who received training and a control group (N = 67) group that did not. Although there were statistically significant group differences for the MLQ dimensions individual consideration and contingent reward in support of their hypotheses, the differences between the experimental and control group for inspirational motivation were positive but not statistically significant $F(1, 150) = 2.76$, $p = .10$. Hardy et al. (2010) suggested that the short time frame of the intervention (5 weeks) may not have been sufficient for establishing dyadic or group-level trust between leaders and followers. Another example of the inspirational motivation aspect of transformational leadership being context dependent is during times of organizational change. For example, Herold, Fedor, Caldwell, and Liu (2008) conducted a study of 343 employees from 30 organizations to measure the positive impact that transformational leadership styles had on employees during a period of change management. Transformational leadership was positively related with change commitment in followers ($r = .35$, $p < .05$) using organizational commitment as a control variable ($r = .16$, $p < .05$).

Leader performance. Bass and Riggio (2006) established two ways that a transformational leader's performance can be determined. The first is through subjective measures such as survey outcomes (the ratings of effectiveness from self and others), and the second is through objective measures established by the organization, such as financial and operational goals. The theoretical proposition for how transformational

leaders are effective at meeting performance goals is by inspiring follower confidence in their abilities, and by establishing follower trust—through idealized influence—to persuade followers to adopt the goals of the organization as their own (Bass, 1985a; Shamir, Zakay, Breinin, & Popper, 1998). In a study of military leadership, Shamir et al. (1998) examined performance appraisals and coded interviews with leaders' superior officers. Their statistical findings supported their hypothesis that the more a leader engages in charismatic behaviors, emphasizes collective identity, and models exemplary behavior, the higher their performance appraisals will be. There have been four major meta-analytic studies with statistically significant correlations between transformational leadership behavior and leader job performance (DeGroot et al., 2000; Fuller, Patterson, Hester, & Stringer, 1996; Judge & Piccolo, 2004; Lowe et al., 1996). Judge and Piccolo (2004) separated the perception of effective performance from formal appraisal measures and found a statistically significant difference, with transformational leadership showing a correlation of .64 (k = 27; N = 5,415) with effectiveness ratings, but only .27 (k = 13; N = 2,126) with formal measures of job performance, indicating a stronger relationship between transformational leadership and what Bass and Riggio (2006) described as the subjective and objective measures of transformational leadership performance.

In a quantitative review of the relationship between a wide range of leader traits and job effectiveness (Hoffman, Woehr, Maldagen-Youngjohn, & Lyons, 2011), leader charisma had a stronger statistical correlation with job effectiveness (r_s = .57) than with

any other single variable they examined, including achievement motivation (r_s = .28), dominance (r_s = .35), energy (r_s = .29), integrity (r_s = .29), self-confidence (r_s = .24), and creativity (r_s = .31). Although these correlations with job effectiveness were statistically significant, an 80% coefficient of variation suggested the presence of numerous moderators between leader traits and leader performance.

Team performance. Özaralli (2003) studied the correlation between transformational leadership and team performance across numerous industries and found statistically significant positive relationships between transformational leadership and perceived power (r = .39), meaningfulness (r = .46), impact and autonomy (r = .23), perceived team effectiveness (r =.62), innovativeness (r = .60), communication (r = .54), and performance (r = .54). Bass and his colleagues (2003) found that transformational leadership predicted performance in a U.S. Army infantry unit; however, the effect was partially mediated by the level of unit cohesion. The authors suggested that transformational leadership may function to augment existing team cohesion and to deepen the commitment of the team to its mission, values, and goals. In another military-based field experiment with 54 leaders, 90 direct-report followers, and 724 indirect followers, Dvir et al. (2002) found that transformational leadership training led to improved group performance for both direct and indirect followers compared to leaders who did not receive training. Lim and Ployhart (2004) tested the effect that transformational leadership has on teams in both maximal and typical performance contexts, and hypothesized that transformational leadership would be more predictive of

team performance in a maximal rather than typical performance context. The maximal context refers to work conditions that are high in stress, time pressure, crisis response, and employee awareness of having their performance observed and evaluated. Lim and Ployhart found that transformational leadership was significantly related to team performance in maximal ($r = .60$, $p < .05$) and to a lesser extent, in typical work contexts ($r = .32$, $p < .05$), supporting both of their team performance hypotheses.

Bass (1985) based his full-range leadership model upon a combination of the archetypical transformational leader described in Burns (1978), the charismatic leadership theory of House (1977), and the findings from mid-20th century leadership models (Blake & Mouton, 1964; Fleishman, 1953; Stogdil, 1950; Stogdill, 1963). The capacity of a leader to build positive and emotionally satisfying relationships with associates is not only an expected behavioral outcome of transformational leadership (Avolio, 1999, Bass & Avolio, 1994), but also the basis behind the assertion that that EI is valuable for predicting transformational leadership (Caruso & Salovey, 2004; Tang, Yin, & Nelson, 2010; Walter, Cole, & Humphrey, 2011).

Emotional Intelligence (EI)

Theoretical Foundations

Historical background. The historical foundation of EI theory has long rested upon the writings of Thorndike (1920), who offered a vision of what he called social intelligence, as a component of a three-fold model of human intelligence: “For ordinary practical purposes it suffices to examine for three ‘intelligences’ which we may call

mechanical intelligence, social intelligence and abstract intelligence" (p. 228). Thorndike broadly defined social intelligence as the ability to understand and manage people, and to act wisely in relationships with them. Mayer and Salovey (1993), Goleman (1995), Matthews, Zeidner, and Roberts (2002), and scores of published dissertations all credit Thorndike as representing the birth of a social intelligence movement in the 20th century.

However, the depiction of Thorndike as having launched an era of non-cognitive intelligence research has been a remarkably overstated position according to Landy (2005), who stated that only ten scientific studies on social intelligence had been conducted during the two decades following Thorndike (1920).. Landy (2005) also vigorously debunked the notion that Thorndike would have embraced the idea of pen and paper tests to measure social abilities in the first place, and suggested instead that he should be credited as having coined a phrase aimed at a journeyman reading audience. By mid-century, the scientific research on non-cognitive/social intelligence was so unproductive and early results so unimpressive that Cronbach (1960) referred to it as a useless concept that was "undefined and unmeasured" (p. 320), hence dismissing social intelligence from further consideration in his treatise on psychological testing. Indeed, aside from Chapin (1942) developing the Chapin Social Insight Test, the future of non-cognitive and social measures of intelligence during this time was tentative and uncertain in part due to Cronbach's dismissal (Mayer et al., 2011).

The post WWII latent period of research and development of new social intelligence measures continued until the emergence of the O'Sullivan and Guilford tests

for social intelligence (OGSI) in the late 1960s (Guillford, 1967; Hoepfner & O'Sullivan, 1968). The OGSI was a set of six factors including expression tests, expressions grouping, silhouette relations, missing cartoons, social translations, and cartoon predictions. The similarities between the OGSI, its key predecessor, the Chapin Social Insight Test (Chapin, 1942), and current EI tests of ability (e.g., Mayer et al., 2002) are remarkable from a historical perspective. For example, the multiple-choice story problems from Chapin's work (p. 220–225) and questions on the MSCEIT related to understanding and using factors are strikingly similar, and the expressions test segments from the OGSI appear to measure an early form of the Faces sub-scale of the perceiving emotion factor in the MSCEIT.

In the early 1970s, Shanley, Walker, and Foley (1971) attempted to resurrect the OGSI without success. They studied 300 students from grades 6 through 12 to test the hypothesis that social intelligence is separate and distinct from cognitive ability measured by the Otis IQ test. The strong correlations between IQ and the OGSI did not support the hypothesis, but this work remains seminal in the history of non-cognitive intelligence in one very critical way—the authors were able to show developmental progression of social intelligence by age, which was an important criterion used by Mayer, Caruso, and Salovey (2000) for validating their first EI instrument, the Multifactor Emotional Intelligence Scale (MEIS).

Perhaps the two most important antecedents in the development of emotional intelligence were Howard Gardner's (1983) publication of *Frames of Mind: The Theory*

of Multiple Intelligences, and Robert Sternberg's (1985a) work on developing a triarchic theory of intelligence (analytical, creative, and practical intelligences; Sternberg, 1985a). Gardner was instrumental in changing the paradigm of intelligence to go beyond the traditional classifications of intelligence consisting of problem-solving (mathematical-logical) and verbal abilities (linguistic) to include five additional classifications: musical, visual-spatial, bodily kinesthetic, interpersonal, and intrapersonal. Gardner expanded intelligence to go beyond the question of how smart someone is, to include the question of how (i.e., the manner in which) an individual happens to be smart (Oliver, 1997).

By contrast, Sternberg (1985a) focused on changing the fundamental model of IQ away from a purely computational and biological model, and toward what he called a governmental model, which is based on the presupposition that intelligence consists of a relationship between the internal and external worlds of the individual governed by their life experience. This model was derived from data collected with colleagues to explore the full terrain of human intelligence using focus groups (Sternberg, Conway, Ketron, & Bernstein, 1981). Through this data, Sternberg identified important, universal criteria that intelligent behavior is adaptive in nature.

Sternberg's concept of intelligence as adaptive to surviving and thriving provided the foundation of Salovey and Mayer's (1990) theory of EI, including their choice of how EI should be normed and scored in its measurement (Mayer et al., 2002). Although Sternberg (1985b) was critical of Gardner's multiple intelligences model, referring to his classifications as a list of talents rather than intelligences, both authors were successful at

establishing bold and lasting arguments for the existence of non-cognitive intelligence within the literature in a way that the old social intelligence paradigm from the 1960s (Guillford, 1967; Hoepfner & O'Sullivan, 1968) could not.

The assignment of specific behaviors as intelligent by merit of their adaptive quality recapitulates theoretical criteria used for factor analytic measures of cognitive ability (Carroll, 1993). For example, consider the definition by Wechsler that intelligence is "the aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with his environment" (Wechsler, 1958, p.7). Gardner (1983) also delineated the non-cognitive aspect of human intelligence in similar terms of adaptation, postulating that intrapersonal and interpersonal modes of intelligence are just as crucial for positive life outcomes as those measured by traditional IQ tests. Thus the revitalization and zeitgeist of non-cognitive intelligence theory in the 1980s effectively set the stage for new models of intelligence based on adaptive behavior; in particular, new approaches toward the old (and largely forgotten) social intelligence uniquely framed as EI (Salovey & Mayer, 1990).

Emergence of emotional intelligence. Salovey and Mayer (1990) viewed EI as a subset of both social intelligence (Chapin, 1942; Guillford, 1967; Hoepfner & O'Sullivan, 1968) and Sternberg's (1985) practical intelligence, with the latter being particularly influential regarding the socially adaptive nature of intelligent behavior. Salovey and Mayer (1990) defined EI 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 action" (p. 189). In their initial paper in 1990, as well as follow-up works (see Mayer & Salovey, 1993), Salovey and Mayer construed EI as three broad-branch factors of expression/appraisal, regulation, and the utilization of emotion. In the theoretical research on intelligence in the early 1990s, scholars such as Carroll (1993) expanded the definition of intelligence, particularly the multi-stratum approach to the mapping *g*-factor intelligence to include a wide range of sensory abilities (e.g., the auditory, visual, kinesthetic modes of IQ; see Daniel, 1997). An open hierarchical taxonomy provided momentum around the investigation of new multiple intelligences due to the advantage of a highly flexible concept of *g*-factor (Daniel, 1997). Despite the broad acceptance of a multi-stratum approach to defining and measuring intelligence based on Carroll (1993), critics, such as Morgan (1996), continued to receive Gardner's multiple intelligences with skepticism, referring to multiple intelligences as cognitive styles rather than distinct factors of intelligence. The approach by Gardner (1983) to include styles or competencies as a representation of intelligence is in contrast with the framework found in Carroll (1993), in which intelligence refers specifically to differences in ability rather than tendencies to act in certain ways. Carroll (1993) viewed style differences as belonging to the domain of personality. Nevertheless, the inclusion of cognitive styles, competencies, and traits (or what Bar-On [1997] referred to as a constellation of mixed measures), became a prelude to a great fragmentation in the conceptualization and definition of EI (Brackett & Mayer, 2003).

Theoretical Frameworks of EI

Arising largely from the release of Daniel Goleman's (1995) popular book, *Emotional Intelligence,* an array of nonhomogenous nomological networks and models for EI sprang up in the late 1990s and early 2000s as separate in theory and measurement from that of Salovey and Mayer (1990). Therefore, the most fundamental issue to address in any historical review of EI is the manner in which EI has been constitutively and operationally defined. Perhaps the most challenging aspect of theory delineation according to Landy (2005) is that the differences between the types of EI are neither subtle nor nuanced in terms of definition, factor structure, and measurement. Instead, the competing constructs are based on radically different conceptual foundations and theoretical inferences (Daus & Ashkanasy, 2005). Similar to Gardner's (1983) basis for multiple intelligences, some theorists have positioned EI as set of behavior styles and competencies (Boyatzis et al., 2000; Cooper & Sawaf, 1996; Sala, 2002) that serve to help the individual adapt to environmental situations and demands, including the ability to control emotional impulses or to stay calm under duress (Bar-On, 1997, 2004; Bar-On & Parker, 2000). Those positioning EI as a set of traits (e.g., Bar-On, 1997; Goleman, 1995) as opposed to measurable differences in ability, have been hard pressed to establish how these traits are clearly distinguishable from existing factors of personality (MacCann, Matthews, Zeidner, & Roberts, 2003).

Ability-Based EI

The basis of this theoretical framework is the ability model of Salovey and Mayer (1990), in which EI is a component of factor-analytic intelligence, specifically one's ability to process affect into cognition (Mayer & Salovey, 1993). By 1997, Salovey and Mayer solidified their factor model from their earlier years of investigation (Mayer & Salovey, 1993; Salovey & Mayer, 1990), construing emotional intelligence as a set of four distinct factors or branches, and thus defining EI as the ability to (a) identify and perceive emotions accurately; (b) appraise and facilitate their use, (c) leverage emotional knowledge to predict social consequences and outcomes, and (d) manage and regulate emotional data to build positive relationships (Mayer & Salovey, 1997). A central aspect of the theoretical framework of ability-based EI was the concept of emotion being one of the three traditional spheres of mental activity, along with cognition and motivation, and additionally, the premise from the old social intelligence models that emotionally intelligent actions are more adaptive (and hence more intelligent) than alternative actions (Mayer, Salovey, Caruso, & Sitarenios, 2003).

The basis of the ability theory of EI is the premise that EI represents differences in mental ability in the same manner as many other strata of human intelligence—by the scoring of correct and incorrect answers to objective test questions (Carroll, 1993). Therefore, ability-based EI refers to measurable skill differences between individuals to accurately recognize, assimilate, and control personal emotion (Mayer et al., 2002). Schutte et al. (1998) described the cognitively oriented approach in Mayer and Salovey

(1997) as “the most cohesive and comprehensive” model of EI (p. 169). However, despite the assertion that adaptive (i.e., intelligent) emotional behavior is universal (Mayer et al., 2002), what passes for emotionally intelligent behavior is likely to vary substantively across cultures (Wong & Law, 2004).

The four factors of ability EI are progressive in nature (Mayer et al., 2002), meaning that the ability to perceive emotion accurately is a requisite skill for using and understanding emotions, which in turn is used to regulate (manage) emotions in oneself, as well as to assist or facilitate the management of emotions in others. Mayer and Salovey (1997) asserted that although all emotions have the potential for changing cognition, only some of the impact is beneficial and therefore intelligent. Emotionally intelligent behavior, then, is reserved for behaviors that result in a heightened ability to identify and appraise emotional data (inputs, or what Mayer et al., 2002, referred to as the experiential area of EI), and then channel or direct the information to manage effective relationships and influence social outcomes (outputs, or what Mayer et al., 2002, referred to as the strategic area of EI).

The first branch of ability EI is *emotional perception* (or identifying emotion). Referred to as “the lowest branch” of EI (Mayer & Salovey, 1997, p. 10), emotional perception refers to one’s ability to accurately recognize emotions in one’s self as well as through the physical states of others Mayer & Salovey, 1997). Emotional perception also includes the assessment of emotion through designs, artwork, and language. Accurate perception of emotion serves to heighten cognitive functioning through an ability to

discern honest versus dishonest emotional expression, and to discern the truth of verbal declarations of feeling.

The second branch is *using emotion*, or what Mayer and Salovey (1997) referred to as the facilitation of thinking. This ability fosters the discernment of how emotions affect judgments, viewpoints, and choices of action. Facilitation of emotion includes the ability to prioritize emotions effectively based on their importance for directing thinking, goal-orientation, and behavioral judgment. Emotions can be used to facilitate useful positive and negative mood states that enable one's self and others to maximize their actions, emphasize different points of view, and to solve problems.

The third branch, *understanding emotion*, refers to a person's ability to analyze emotions and emotional knowledge to interpret the meaning of emotions, and to predict social outcomes based upon the cause and effect of complex emotions and their interpersonal and intrapersonal consequences. The purpose of accurate understanding of emotions for heightened cognition includes the ability to predict transitions from one emotional state to a future state, such as when feelings of sadness are likely to transition to a pensive state, or the situational conditions in which feelings of anger transition to shame (Mayer & Salovey, 1997).

Mayer and Salovey (1997) described the fourth branch, *managing emotion*, as reflective regulation and promotion of emotional and intellectual growth. These authors viewed regulation and management of emotion as the highest branch of ability. Emotional management refers to one's capacity to stay open to feelings both pleasant and

unpleasant, for the purposes of engaging or detaching from emotion. More specifically, regulation infers the ability to mitigate (without repressing) undesirable emotional states in one's self and others, while heightening (without exaggerating) positive, desirable states. The practical application of emotional management includes the ability to build positive relationships with others by relating with their feelings, to help others make better decisions given their emotional state, and to influence, channel, and direct emotion and behavior toward beneficial outcomes (Mayer et al., 2002). Jordan et al. (2002) proposed that emotional management relates to group collaboration, with higher EI leading to increased sharing of information and knowledge, which in turn leads to increases in goal achievement and performance.

The distinguishing feature of ability theory is that its basis is the intersection of emotion and cognition (Mayer & Salovey, 1997; Salovey & Mayer, 1990). Predictions and assessments of intelligent behavior are then similar to other measures of intelligence, insofar that mental problems have right and wrong answers that are assessed by their adaptability (i.e., correctness) compared with less desirable alternatives (Mayer et al., 2000). Mayer et al. (2002) also proposed that EI has a developmental component, with ability increasing with age and life experience. Mayer and Salovey (1995) explored the developmental aspect of EI, and theorized that individuals high in EI would tend to be raised in homes with emotionally nurturing parents, select peers during childhood and adolescence who were emotionally positive role models, and develop expert knowledge

in a specific emotional area related to aesthetics, moral reasoning, and social problem solving.

The theoretical underpinning of ability EI has been criticized for its emphasis on adaptation and consensus as appropriate definitions of intelligence (Antonakis & Dietz, 2010; Maul, 2012). Critics (e.g., Larsen & Lerner, 2006) specifically questioned the concept that the most popular way to solve emotional challenges in life is necessarily the most intelligent approach by default, thereby also questioning the ability of the model to distinguish individuals of very high ability from those of average ability. Other scholars have also criticized the ability model for domain overlap with cognitive ability and personality (Fiori & Antonakis, 2012; Rossen, Kranzler, & Algina, 2008), the latter also being a critique levied against the second theoretical framework of EI—the mixed model.

Mixed-Model EI

Mayer, Caruso, and Salovey (2000) first used the term, *mixed model*, to define a socio-emotional concept of EI that combined personality characteristics in addition to self-estimates of emotional ability. Bar-On (1997) described EI as consisting of a constellation of personality traits, learned competencies, and personal preferences. Mayer and Salovey (1997) eventually referred to their original definition of EI in 1990 as falling under the mixed model framework, and indeed at one point along with several colleagues described EI through three competency indicators: (a) attention to mood, (a) clarity and understanding of mood, and (a) mood repair (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995). In their original article, Salovey and Mayer (1990) not only established a

mental ability conception of EI, but also included personality characteristics believed to serve as markers or indications of high or low EI, and which distinguished between individuals who are warm and genuine in demeanor from those who are "oblivious and boorish" (p. 199). Using dispositional tendencies as markers indicative of emotional ability influenced the development of many competing mixed model frameworks (Bar-On, 1997; Boyatzis et al., 2000; Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006; Cooper & Sawaf, 1996; Jordan, Ashkanasy, Härtel, et al., 2002; Schutte et al., 1998; Wong & Law, 2002). Because of the earlier influence of Salovey and Mayer (1990), mixed-model EI frameworks have some conceptual domain overlap with ability EI by including characteristics associated with intelligence such as problem solving (Mayer et al., 2002). Mixed-model frameworks also include characteristics representing life qualities or dispositional tendencies rather than abilities such as happiness and impulsiveness (Bar-On, 1997). Bar-On (1997) defended this approach by asserting that model complexity is necessary in order for EI to predict the degree to which an individual is likely to cope with the emotional demands and pressures of life.

The exact composite of traits associated within the mixed-model framework varies by theorist. Goleman (1995), for example, presented evidence from cognitive neuroscience to identify five emotional competencies associated with socially desirable behavior: (a) self-awareness, (b) self-regulation, (c) motivation, (d) empathy, and (e) social skills. In a follow-up work that focused the application of EI within the specific workplace setting, (Goleman, 1998) defined EI as "learned capability based on emotional

intelligence that results in outstanding work performance" (p. 9). Boyatzis et al. (2000) explained that EI can be inferred by the ways individuals use their skills of self-awareness and social awareness toward effective solutions of interpersonal conflicts and challenges.

Like Goleman (1995) before him, Bar-On (1997) also began with the framework of Mayer and Salovey (1990) to build his mixed model of EI. Using psychological resilience as a basis for what constitutes EI, Bar-On viewed high-functioning behavior as predictive of an individual's chances for success in life, as well as determining his or her emotional health and well-being. In a fashion similar to Salovey and Mayer (1990), Bar-On cited Darwin's evolutionary theory, Thorndike's social intelligence, and Wechsler's expansive definition of intelligence as foundational to his theory. Bar-On's framework for mixed model EI has been called the most comprehensive (Matthews et al., 2002) and is divided into five composite dimensions: (a) interpersonal skills, (b) intrapersonal skills, (c) adaptability, (d) stress management, and (e) general mood.

In addition to the combination of abilities and traits, another theoretical underpinning that connects the various mixed model frameworks is the proposition (e.g., Schutte et al., 1998) that individuals have sufficient insight into their own four-factor EI ability level to provide accurate self-reported data. This proposition is dubious given that studies on self-estimated cognitive ability have shown a positive correlation of only .22 between self-estimated and actual fluid IQ (Chamorro-Premuzic, Moutafi, & Furnham, 2005). Mayer and Salovey (1997) specifically framed their theory of EI as a stratum of

general intelligence. There is also an inverse relationship between neuroticism and self-estimated mental ability (Chamorro-Premuzic et al., 2005), indicating that individuals high in neuroticism may over-estimate their own ability on questionnaires. Salovey (2006) suggested that leaders who overestimate their EI are actually demonstrating low EI (poor emotional self-awareness). The entire body of theory associated with mixed model EI has been roundly criticized as a confusion between EI factors and existing personality factors (Roberts et al., 2010) and suffering from a lack of conceptual clarity. The lack of clarity in mixed model EI theory is largely due to the manner in which the definitions of EI have been stretched to include nearly any quality from positive psychology that is unrelated to academic ability or fluid intelligence (Matthews, Zeidner, & Roberts, 2012).

Measurement of EI

To organize the many ways EI has been measured, EI researchers Daus and Ashkanasy (2005) and O'Boyle et al. (2011) sorted EI into a three-category taxonomy. The first category includes instruments based on the ability EI model of Salovey and Mayer (1990). The second and third categories respectively include (a) self-report questionnaires based on the four factors of ability EI, and (b) self-report questionnaires based on a wide range (or mix) of EI factors.

Ability-based tests. Collaborating with their colleague Caruso, the ability EI researchers Salovey and Mayer created their first test of ability-based EI, the MEIS (Mayer et al., 2000a). Previously, Salovey and Mayer had co-created a self-report

measure of EI, the Trait-Meta Mood Scale (TMMS; Salovey et al., 1995), which is an example of a mixed model EI instrument. By developing the MEIS, the authors sought to meet criterion standards for EI being a legitimate mode of intelligence. In addition to predicting adaptive life outcomes better than cognitive intelligence alone, Mayer et al. (2000) argued that a valid instrument must also meet the following criterion standards: (a) its operational definition includes discrete sets (or factors) of ability; (b) it must show that defined ability factors correlate with one another (while also showing unique variances from pre-existing measures); and (c) it must demonstrate a pattern of progressive developmental ability increase associated with age and life experience. Thus, during 1999-2000—roughly 10 years after their initial research was published—the MEIS was established as the first ability-based instrument measuring EI.

The MEIS was operationalized around 12 task components of EI representing three distinct factors (perceiving, assimilating, and managing). Norming for the test occurred using data from both a consensus group scoring and an expert group scoring (which originally consisted of the authors only; Mayer et al., 2000). The three-factor result differed from the theorized four factors, with the fourth factor of using emotion emerging though oblique data rotation using only the consensus group data. Because the test contained 402 total items and took well over an hour for participants to complete (Weinberger, 2002), one of the determining considerations for the need to revise the MEIS was the practical consideration of time length and expense for ongoing research.

Using the same model of EI and data collection methods used to develop the MEIS, Mayer et al. (2002) developed its revision, the MSCEIT V2.0 (the earlier MSCEIT V1.1 was an unpublished research version). The authors updated the hierarchical factor structure of EI as illustrated below in Figure 3.

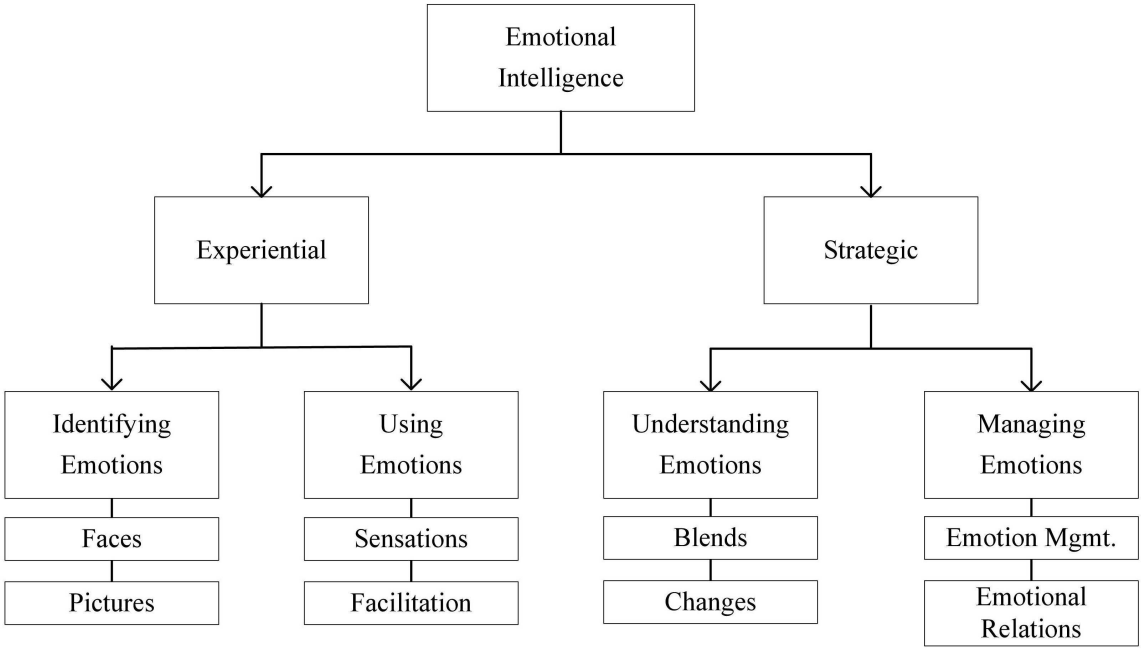

Figure 2. The ability model of emotional intelligence measured by the MSCEIT, including total, area, branch, and subscale level. *Note:* From "*MSCEIT User Manual*" by J.D. Mayer, P. Salovey, and D.R. Caruso, p. 86. Copyright 2002 by Multi-Health Systems. Adapted with permission.

Although the four factors remained the same operationally and conceptually as the MEIS, the number of subscales in the MSCEIT dropped from 12 to 8, and the descriptive language associated with each factor was simplified and more specific. This new framework led to the specification of the MSCEIT through four branches and eight subscales: The first branch, perceiving emotions, has subscales (a) face identification and

(e) picture identification; the second branch using—or integrating—emotions, has subscales (b) facilitation and (f) sensation; the third branch, understanding the consequences and outcomes of emotions, has subscales (c) changes of emotion and (g) blending of multiple emotions; the fourth branch, the ability to manage emotions in both oneself and others, has subscales (d) emotional management and (h) relations management (Mayer et al., 2003). This four-factor model also clustered branches 1 and 2 into an area score (experiential), and branches 3 and 4 into an area score (strategic). Some researchers have described the areas of ability EI as categorical descriptors of the MSCEIT that do not represent a two-factor framework for EI (Palmer, Gignac, Manocha, & Stough, 2005; Rossen et al., 2008). Although the area descriptors remain in their conceptual model, area scores are seldom reported by researchers in favor of total EI and four-factor (branch) scores, and Mayer, Salovey, and Caruso do not even raise the issue of experiential and strategic area scores in their 2008 analysis or 2011 review of EI (Mayer et al., 2008; Mayer et al., 2011).

The Diagnostic Analysis of Nonverbal Accuracy (DANVA) assesses visual cues of basic emotional expressions, and auditory nonverbal cues of emotion for both adults and children (Nowicki & Duke, 1994). The DANVA is a test of emotional perception (facial recognition) that has been described by Walter, Cole, and Humphrey (2011) as a single-factor measure of ability EI. Nowicki and Duke (2001) reported an internal consistency of .78 across test items on the DANVA. Although its use is rare in organizational research, the DANVA has been used in an attempt to demonstrate a

correlation between EI ability and transformational leadership (Rubin, Munz, & Bommer, 2005). Discussion of the study by Rubin et al. (2005) appears in the empirical review section of this chapter.

In sum, the MEIS, the MSCEIT, and the DANVA rely on the use of veridical scoring (right and wrong answers to test questions), as opposed to self-rated perceptions or opinions about one's skill, creating an objective testing approach and the most compelling means for construing emotional abilities as a legitimate form of factor-analytic intelligence (Mayer et al., 2008; McEnrue & Groves, 2006). Ability EI has been incrementally distinct from g-factor fluid intelligence in previous research (Rossen & Kranzler, 2009). Because The MSCEIT in particular measures abilities that are essential to building meaningful and authentic relationships with people in a manageable-size test (compared to the MEIS), it also represents a compelling and logical construct for predicting positive relationship outcomes between leaders and associates in organizational field research (Brown & Moshavi, 2005; Webb, 2005; Wu, Liu, Song, & Liu, 2006), which is why it has been selected for this study. Presentation and discussion of reliability and validity of the MSCEIT appears in Chapter 3.

Self-report ability. This second category of measurement (self-report ability questionnaires) was separated as a distinct measurement category from ability EI tests by Daus and Ashkanasy (2005), and then again by Joseph and Newman (2010), Walter et al. (2011), and O'Boyle et al. (2011). This separation is due to the sharp philosophical difference between whether or not EI (as a form of intelligence) can be meaningfully

determined by self-estimation of ability and personality-style question items as markers rather than by testing intelligence traditionally through the use of right and wrong answers (Law, Wong, & Song, 2004). One advantage of the questionnaire format is to provide researchers with a short and cost-effective alternative to lengthier ability EI measures (Brackett & Mayer, 2003). Another advantage to a questionnaire approach is the possibility that subjective assessment may reveal more about an individual's emotional ability than a priori determinations of right and wrong answers to complex socio-emotional real-life scenarios (Matthews et al., 2012). One final advantage is the ease with which the EI questionnaire format can be translated into different languages without losing reliability and validity due to cultural differences for right and wrong answers to adaptive emotional behavior (Wong & Law, 2002). There are five major instruments associated with this category, as briefly discussed below.

The Assessing Emotions Scale (AES) is 33-item self-report EI assessment (Schutte et al., 1998) based upon Mayer and Salovey's (1997) four-factor model of ability-based EI (perceiving, using, understanding, and managing emotions). Because this was initially an unnamed assessment of EI, it has often been referred to as the Schutte Self Report Inventory of Emotional Intelligence (SSREI; see Gignac, Palmer, Manocha, & Stough, 2005), among other names. However, by the year 2009 the AES nomenclature was adopted (see Schutte, Malouff, & Bhullar, 2009). The AES uses a 5-point Likert-type scale of agreement, with scores ranging from 33 (lowest) to 165 (highest). Schutte et al. (2009) set forth to develop the scale after concluding that the cognitively oriented

approach of Mayer and Salovey (1997) provided “the most cohesive and comprehensive” model of EI (p. 169). Development began by establishing a pool of 62 items using the work of Salovey and Mayer (1990) as a theoretical base for an initial pilot test.

Palmer and Stough (2001) developed the Swinburne University Emotional Intelligence Test (SUEIT), a 64-item assessment based on a 5-point Likert scale of agreement. The SUEIT is a self-report EI instrument specifically designed for organizational settings. Although based largely upon the Mayer and Salovey (1997) ability model, the factor structure of the SUEIT is slightly different from the traditional four factors of ability EI. Instead, the SUEIT consists of the following five sub-scales: emotional recognition and expression (similar to perceiving emotion in ability EI, this is the ability to identify one’s own feelings and express them); emotions direct cognition (measures how emotions facilitate thought the problem solving); understanding emotions (specifically, the emotions of others); emotional management (similar to the ability-based EI factor of the same name, measures the ability to manage positive and negative emotions in oneself and in others); emotional control (measures the application of emotional management to workplace situations). Pérez, Petrides, and Furnham (2005) reported that researchers have yet to demonstrate incremental validity for the SUEIT beyond personality and cognitive ability.

Between the years 2002 and 2006, the SUEIT was a popular EI instrument choice in leadership studies, particularly studies of the relationship between EI and transformational leadership (Gardner & Stough, 2002; Moss et al., 2006; Palmer,

Gardner, & Stough, 2003b).However, the SUEIT eventually waned in use compared with the shorter and more parsimonious Wong and Law Emotional Intelligence Scale (WLEIS; Wong & Law, 2002), which has become a more popular instrument post 2006 for examining the EI - transformational leadership relationship, particularly with a growing interest in studying EI among researchers in non-English speaking countries (Wang & Huang, 2009).

Due to the fact that the MSCEIT has not been translated into languages other than English (Mayer et al., 2002) and more recently Norwegian (Multi-Health Systems, 2005), it may not be a valid instrument for use in non-Western workplace cultures (Caruso, personal communication August 6, 2006). The WLEIS was developed by Wong and Law (2002) to provide a short measure of four-factor EI that was also suitable for research in the non-Western workplace, most notably in Asian cultures. Although Mayer and Salovey's (1997) EI-factor structure was used as a conceptual framework, the fourth EI factor (emotion management) relied upon Gross' (1998) model of emotion regulation for theoretical foundation and item development (Wong & Law, 2002). Although very similar to the framework of emotional management described in Mayer and Salovey (1997), in which emotional regulation was defined as the recognition, selection, and facilitation of emotion in both oneself and in others, Gross (1998) described emotional regulation through a temporal, intrapersonal process beginning with emotional cues (input), individual response tendencies (via antecedent and response-focused processing), and emotional expression (output).

Internal consistency reliability for the four factors of the WLEIS (16 items total; four items for each factor) ranged from .83 to .90. Items are rated on a 7-point Likert-type scale of agreement. In their analysis, Law, Wong, and Song (2004) found acceptable convergence with two other EI measures, the Trait Meta-Mood Scale (TMMS; Salovey et al., 1995) and the EQ-i (Bar-On, 1997). The strength of the WLEIS is its validity with non-English speaking participants, but because their project data was collected exclusively in Hong Kong and the People's Republic of China, the results of their findings may not generalize outside of Asian cultures (Wong & Law, 2004). For example, a subdued or a non-emotional response when faced with inappropriate displays of emotion by a boss is likely to be viewed as a high EI behavior in Chinese culture, but could be viewed as emotional disengagement in a Western workplace setting (Wong & Law, 2004).

The Workgroup Emotional Intelligence Profile, or WEIP (Jordan, Ashkanasy, Härtel, et al., 2002), is a 27-item measure based on Mayer and Salovey's (1997) model of ability-based EI. The unique design purpose of the WEIP is to create work-team EI profiles, specifically to predict the effectiveness and goal performance of teams. The proposed proposition from Jordan et al. (2002) is that work-team collaboration increases as team EI averages increase. Higher team EI causes team members to increase information and knowledge sharing, which in turn leads to increases in goal achievement and performance. The WEIP-3 became the first and most theoretically important refinement of earlier prototypes (WEIP-1 and WEIP-2) due to a stronger theoretical

association with Mayer and Salovey's (1997) ability-based EI model (Jordan et al., 2002). Refinements to the WEIP continued to unfold in rapid fashion, and by 2004 a WEIP-6 emerged (Jordan & Troth, 2004).

The WEIP has a seven-point, Likert-type scale of agreement, from 1 (*strong disagreement*), to 7 (*strong agreement*). Jordan et al. (2002) conducted a factor analysis, finding seven factors grouped into two scales: (a) Ability to Deal with Own Emotions and (b) Ability to Deal with Other's Emotions. They found convergent validity for the WEIP with scales for self-monitoring, interpersonal reactivity, emotional control, and creative problem solving. Jordon et al found evidence for the construct validity of the WEIP with correlations between the WEIP and two out of the three factors of the TMMS, specifically clarity of mood ($r = .24$, $p < .01$) and repair of mood ($r = .28$, $p < .01$).

The *Self-Rated Emotional Intelligence Scale* or SREIS (Brackett et al., 2006) is a 19-item self-report measure (it utilizes a 5-point scale in which 1 = very accurate; 5 = inaccurate), designed to map onto the four factors of the MSCEIT (Mayer, Salovey, & Caruso, 2002) as a performance measure of EI. The authors selected items from the TMMS (Salovey et al., 1995) and the AES (Schutte et al., 1998), as well as the creation of novel items to provide adequate coverage for all four ability-based EI factors (perceiving emotion, using emotion, understanding emotion, and managing emotion). Factor analyses by Brackett et al. (2006) confirmed the four-factor model and a single factor hierarchical model of EI. Correlations between the four dimension scores and the total SREIS score were statistically significant, with *r*s ranging from .57 to .78. Brackett

et al reported a coefficient alpha estimate of reliability for scores on the overall measure as .84.

Despite the instrument being based upon the four factors of ability-based EI, Bracket et al. (2006) found that the SREIS and the MSCEIT correlations were not strong ($r = .19$, $p < .01$), a finding consistent with previous research on the relationships between the MSCEIT and other self-report EI measures (Brackett & Mayer, 2003; Mayer et al., 2002; Van Rooy, Viswesvaran, & Pluta, 2005). In a three-study pilot test with college students, Brackett et al. (2006) also found that the reliability of the relatively short 19-item SREIS was inconsistent (.84, .77, and .66, respectively). The scale has not had revisions or updates since its initial 2006 publication.

Self-report mixed model. The use of a constellation (or mix) of self-estimated abilities, personality traits, competencies, and personal behavioral preferences characterize mixed model instruments (Bar-On, 1997). Researchers have described mixed model measures as encompassing an array of competency domains and personality traits that are "connected only by their non-redundancy with cognitive intelligence" (Joseph & Newman, 2010, p. 55). Construct validity problems continue to appear in the accumulated body of evidence, problems that may prevent future theoretical consideration (Joseph & Newman, 2010). Additionally, the ease with which respondents can provide fake answers to obtain high scores on mixed model EI measures (Grubb & McDaniel, 2007) raises additional concerns for their practical use within organizations given that social desirability pressure is likely to alter participant responses. The most

prevalent measures in the literature are the EQ-i (Bar-On, 1997), the TMMS (Salovey et al., 1995), and the ECI (Boyatzis et al., 2000).

The rationale behind the development of the EQ-i (Bar-On, 1997) is that effective emotional functioning predicts an individual's chances for success in life as well as determining his or her well-being. The EQ-i has been described as the most comprehensive measure of the mixed model instruments (Matthews et al., 2002) and is structured through a total EQ score divided into five composite scales and 15 sub-scales. Bar-On (1997) referred to his model descriptively as being mixed (a nomenclature defined and expanded upon in Mayer et al., 2000), referring to the mixed constellation structure of competencies, dispositions, and emotional capabilities employed within the instrument.

Parker, Keefer, and Wood (2011) reported estimates of reliability and evidence for the construct validity of scores on a short form of the EQ-i (the EQ-i:S), using an undergraduate university student population. A variety of measures in addition to the EQ-i:S were included as criteria variables in this analysis: the Toronto Alexithymia Scale, NEO Five-Factor Inventory, and Connor's Adult ADHD Rating Scale. To test convergent validity, the MSCEIT was selected as an EI measure. The EQ-i:S scores showed convergence with the MSCEIT (65% shared variance) and alexithymia (29%). The correlation between total score EQ-i:S and MSCEIT was .81, demonstrating that both tests are largely measuring the same latent construct (Parker et al., 2011). Full-scale EQ-i analysis of reliability and validity was examined by Dawda and Hart (2000), who found

support for the convergent validity with extraversion, conscientiousness, and agreeableness; discriminant validity with measures of alexithymia, neuroticism, depression, and stress somatization.

Subsequent reviewers of Dawda and Hart's (2000) data analysis (Matthews et al., 2002) expressed their concerns that the EQ-i largely serves as a proxy measure of existing personality traits. Furthermore, in Bar-On's (2000) own review of his scale, he claimed there was little empirical defense for five of the 15 subscales, and soon thereafter (in 2002), shifted toward a belief that instead of his instrument measuring EI, the EQ-i is actually a hybrid measure of emotionally and socially intelligent behavior (as cited in Thingujam, 2002).

Although seldom used today in the peer-reviewed literature compared to others, the first mixed model instrument of EI was developed by ability-based model proponents Salovey and Mayer along with a group of colleagues. The TMMS (Salovey et al., 1995) measures a three-factor structure of EI: (a) attention to mood, (b) clarity and understanding of mood, and (c) mood repair, which represents the regulation of mood valence (pleasant and unpleasant) by either changing an unwanted mood or maintaining a desirable state. The TMMS consists of 30 items (10 for each scale) rated along a 5-point Likert-type scale of agreement. Despite being a mixed model approach (i.e., a mixture of personality preference and ability estimation using self-reported measurement), the TMMS represents the first attempt to operationalize Salovey and Mayer's 1990 framework. Because the TMMS was successfully translated and validated for use by

Spanish-speaking participants (Fernandez-Berrocal, Extremera, & Ramos, 2004), a shortened, translated version of the TMMS continues to be used in the literature to measure EI (Fellner et al., 2012; Gorostiaga, Balluerka, Aritzeta, Haranburu, & Alonso-Arbiol, 2011), but is otherwise rarely used, with Fox and Spector (2000) referring to the instrument as being a vaguely defined operationalization of EI.

The commercial success of Goleman's books on EI (Goleman, 1995; 1998) drew significant scholarly attention to the *Emotional Competence Inventory*, or ECI (Boyatzis et al., 2000). The ECI consists of four competencies: (a) self-awareness, (b) self-management, (c), social awareness, and (d) social skills. Each of the four competencies has a list of sub-scale dimensions that are based on Goleman's list of 24 competencies (Goleman, 1998). The psychometric properties of the ECI are questionable. As reported in its technical manual (Sala, 2002), the ECI shows a wide range of internal consistency reliability coefficients, with one sub-scale (conflict management) at $r = .39$. Test-retest reliability coefficients also perform poorly, with one sub-scale (service orientation) at $r = .05$. Although the ECI has been used as a measure of EI in research examining relationships with leadership-related variables, such as leader emergence (Offermann, Bailey, Vasilopoulos, Seal, & Sass, 2004), in terms of the relationship between the ECI and transformational leadership, a review of the literature indicates that no peer-reviewed studies have been conducted to date using the ECI. The decrease in use of the ECI in organizational research is not surprising given the criticism of its reliability and validity compared with other EI measures (Zeidner, Matthews, & Roberts, 2004).

Empirical Review: Emotional Intelligence

Antecedents of EI. The model of EI being used largely influences any review of the antecedents of EI. For example, researchers have purported that ability EI is a mental ability unrelated to personality (Mayer et al., 2011), whereas mixed model EI intentionally includes factors of individual differences that are associated with personality (Bar-On, 2004; Van Rooy, Viswesvaran, & Pluta, 2005). Due to the reality that there isn't a universally agreed upon operational definition of EI (Cherniss, 2010), the antecedent and outcome literature related to EI must be reviewed carefully with respect to interpretation based on the mode of EI employed by the researcher (Roberts et al., 2010; Van Rooy & Viswesvaran, 2004). Van Rooy et al. (2005) assessed the relationship between different measures of EI classified by the mixed model framework. The authors reported an estimated true score correlation of $\rho = .71$ between mixed model EI measures ($k = 11$, $N = 3{,}259$). However, the authors found that when samples were aggregated, the mixed model EI measures were independent from ability EI tests ($\rho = .14$; $k = 13$, $N = 2{,}442$).

Barbuto and Story (2010) proposed that locus of control and mental boundaries are antecedents of mixed model EI. The mental boundaries construct includes a dichotomy of thin and thick mental boundaries (Hartmann, 1991). Individuals with thin mental boundaries are capable of moving from one feeling to the next with ease, are more open to ambiguity, and are more inclined toward interpersonal connectedness, whereas individuals with thick mental boundaries are more inclined toward structure, certainty,

closure, and interpersonal separateness (Hartmann, 1991). Barbuto and Story proposed a hypothesis that thin boundaries would be correlated with EI, and the results of their examination supported their hypothesis ($r = .32$; $p < .01$). Internal locus of control also correlated with EI scores ($r = .41$; $p < .01$). Additional studies also confirmed the relationship between locus of control and EI (Deniz, Traş, & Aydoğan, 2009; Johnson, Batey, & Holdsworth, 2009; Kulshrestha & Sen, 2006).

A longitudinal study of 188 predominately African-American children and their mothers (Bennett, Bendersky, & Lewis, 2005) focused on the contributions of individual and social characteristics as antecedents of emotional recognition and emotional situational knowledge. Positive parenting was shown to be positively correlated with emotional knowledge in children at 4-years of age, however the effect included mediating factors such as a low-risk home environment, the presence of a verbally intelligent mother, and cognitive ability in the child.

Impulse control has long been associated with mixed model EI (Bar-On, 1997), including the ability in very young children to delay gratification, which in turn is associated with the development of socio-emotional competencies later in adolescence (Shoda, Mischel, & Peake, 1990). Adolescents who failed to delay gratification at age four demonstrated low emotional regulation ability in their early teen years, including being short-tempered, reporting increased negative affect and self-image, lower stress-coping skills, and higher susceptibility to stress immobilization (Shoda et al., 1990). In adults, Dawda and Hart (2000) found that participants scoring high in EI exhibited a

stronger capacity for handling stressful situations without losing control, more frequent positive moods, and lower intensity level of affect. Dawda and Hart also found that EI correlated negatively with alexithymia and depression.

Gender and age are both important antecedent variables to consider for EI. Research findings indicate women consistently show more ability in emotional management than men (Brody & Hall, 2000; Hall & Mast, 2008). In a study using a self-reported EI measure, women scored higher than men in total EI (Schutte, Malouff, Simunek, McKenley, & Hollander, 2002). This difference also shows up in ability EI, with women scoring slightly higher (3.2% explained variance) in total EI compared to men (Mayer et al., 2000). Hall and Mast (2008) found that women performed better than men did in a series of affective tasks related to interpersonal sensitivity. However, when a competition variable was added to the exercise, men's performance increased to the level of women, indicating that different motivational strategies may explain part of gender differences in emotional sensitivity.

Age has also predicted EI, and may even represent a mediating factor of gender differences in ability-based test scores (Fernández-Berrocal, Cabello, Castillo, & Extremera, 2012). The recent findings by Fernández-Berrocal et al. (2012) supported the developmental (life-span) premise for emotional ability found in Mayer and Salovey (1995; 1997), who proposed age to perhaps be an even more important factor than gender in determining ability EI. Mayer and Salovey (1995) stated that EI score increases with age are in part due to the natural connections between one's life experiences and an

expanding lexicon of emotion that occur with maturity into adulthood. Age explained more variance in total ability EI scores than gender, with the lowest age group performing the worst (Mayer et al., 2000). This was particularly true for the stategic score branches of understanding and management combined, with age explaining 9.2% of score variance. In an attempt to identify additional situational and demographic antecedents of ability EI in a nurse population, Freel (2010) reported that MSCEIT score differences were non-statistically significant with respect to years of education or work experience, controlling for age.

Cognitive ability seems to play another important role in determining EI, particularly ability-based EI. Whereas ability EI tends to be less correlated with personality than mixed model EI (Rivers, Brackett, Salovey, & Mayer, 2007), ability EI correlated positively and statistically significantly with cognitive ability, with correlations ranging between .30 and .40 (Roberts, Zeidner, & Matthews, 2001). Zeidner, Roberts, and Matthews (2008) proposed that given its connection to *g*-factor, ability EI could fit into the multistratum map of general-factor analytic intelligence advanced by Carroll (1993). Cognitive functioning is hypothesized to predict ability EI scores to some degree because individuals require both abilities to facilitate thinking and to regulate their emotions toward effective interpersonal and intrapersonal goals and purposes (Rivers et al., 2007). However, there are some indications that unlike using, understanding, and managing emotions, the factor of perceiving emotions may not relate to cognitive ability. For example, accuracy scores on the DANVA (an ability measure of EI associated with

the perceiving emotions factor) were statistically unrelated to *g*-factor intelligence scores (Nowicki & Duke, 1994).

The strongest and most consistently reported connection between cognitive ability and ability-model EI (positive correlations above .50) appears to be with the understanding branch (Bastian et al., 2005; Caruso, 2006; Lumley, Gustavson, Partridge, & Labouvie-Vief, 2005; Rivers et al., 2007). Whereas some critics, most notably Antonakis (2003; 2004), declared that high correlations with IQ were a reason for discarding EI, others contest this view (e.g. Rivers et al., 2007; Van Rooy et al, 2005), believing that the correlation is appropriate for establishing convergent validity, rather than failing to demonstrate discriminant validity. A moderate, positive correlation between IQ and ability EI is consistent with the theoretical basis for ability EI as a type of human intelligence (Mayer & Salovey, 1995; 1997). Moderate, positive correlations were reported between ability EI and verbal SAT scores (Brackett, Mayer, & Warner, 2004; Lopes, Salovey, & Straus, 2003), although Salovey et al. (2003) found non-statistically significant correlations (close to zero) with verbal scores on the WAIS-III (r = .15, n.s.). Researchers have reported additional low to moderate positive correlations between total ability EI and ACT scores (O'Connor & Little, 2003) and between EI and WISC-R-95 scores (Zeidner, Shani-Zinovich, Matthews, & Roberts, 2005).

Unlike the ability model of EI, mixed model EI s based specifically on non-cognitive aspects of intrapersonal and interpersonal functioning (Bar-On, 1997), which suggests that relationships with cognitive ability should be small to non-existent. Indeed,

an analysis by Newsome, Day, and Catano (2000) reported no statistically significant relationship between IQ scores and scores on measures based on mixed model EI. Offerman et al. (2004) likewise found a non-statistically significant relationship between EI and total SAT scores (r = .04, n.s.), but a small positive correlation with verbal SAT (r = .09, p < .05).

A study by Grubb and McDaniel (2007) reveals a challenge with accurately determining the nature of the relationship between IQ and mixed model EI. Undergraduate student participants were asked to complete the EQ-i twice. The first time they were asked to assess their ability as honestly as possible, and the second time they were asked to fake their score to obtain the best score outcome. When asked to take the EQ-i assessment with the goal of maximizing their personal score (i.e., faking good), participant IQ and agreeableness combined to predict high EI scores, showing that higher IQ helps participants to potentially fake mixed model EI scores, which rely on self-reported questionnaires. The finding by Grubb and McDaniel (2007) indicates the importance of study context when selecting an EI measure, especially in workplace field research, in which social desirability bias and a perceived pressure to fake good may be a factor influencing employee responses on self-reported EI instruments (Kluemper, 2008).

Personality is the most frequently discussed antecedent of mixed model EI in the literature (Antonakis & Dietz, 2011), and the degree to which personality predicts scores on the EQ-i, in particular, has been called “excessive” and “egregious” (Zeidner et al., 2008, p. 66). In a two-study paper, De Raad (2005) combined 437 items from existing

mixed model measures of EI, revealing a factor structure matching four of the Big Five personality factors, with 42% of items in Study 1 fitting the neuroticism factor, and 51% in Study 2 matching three factors (extraversion, agreeableness, and conscientiousness). Similarly, Murensky (2000) found scores on the ECI to positively correlate with the Big Five personality factors of extraversion (*r*s ranging from .24 - .49), openness (*r*s ranging between .22 - .28) and conscientiousness (*r*s ranging from .30 - .39). A later analysis (Byrne, Dominick, Smither, & Reilly, 2007) found that ECI scores correlated negatively with neuroticism ($r = -.48$, $p < .01$) and positively with extraversion ($r = .53$), openness ($r = .37$), agreeableness ($r = .27$), and conscientiousness ($r = .34$).

The Big Five factors of personality play less of an antecedent role in predicting ability EI across the empirical literature compared to mixed model. For example, Brackett and Mayer (2003) administered scales assessing the Big Five personality factors to college students, finding higher correlations with mixed model EI (measured by the EQ-i) compared with ability EI (the MSCEIT), with extraversion correlating only .11 positive ($p = ns$) with ability EI compared with .37 ($p < .001$) for mixed model EI. The personality factor of neuroticism showed no statistical significance with ability EI, compared to a negative correlation ($r = -.57$ $p < .001$) for mixed model. Only openness ($r = .25$) and agreeableness ($r = .28$) correlated positively with the MSCEIT (Brackett & Mayer, 2003). An analysis across five studies ($N = 1584$) using weighted means (Mayer, Salovey, & Caruso, 2004) indicated that agreeableness ($r = .21$, $p < .005$), openness ($r = .17$, $p < .005$), and to a lesser extent conscientiousness ($r = .11$, $p < .005$) correlated

positively with ability EI, whereas neuroticism correlated negatively at only -.09 ($p <$ .005). Mayer et al. (2004) concluded that relationships between the Big Five personality factors and ability EI were weak compared to mixed model EI, and as a result, mixed model EI provides limited information at best about the characteristics of high EI individuals. The degree to which agreeableness and openness show low to moderate positive correlations with ability EI across several studies was interpreted by Mayer et al. (2004) as being consistent with ability EI theory.

Consequences of EI. Researchers have found statistically significant relationships between EI and a wide range of outcomes, including academic performance (e.g., Brackett, Rivers, & Salovey, 2011; Lyons & Schneider, 2005), health and well-being (Brackett & Mayer, 2003; Lopes et al., 2003), and work outcomes such as job performance (Joseph & Newman, 2010; O'Boyle et al., 2011), and job satisfaction (e.g., Brackett & Mayer, 2003; Brunetto, Teo, Shacklock, & Farr-Wharton, 2012; Carmeli, 2003; Schutte & Malouff, 2011; Sy, Tram, & O'Hara, 2006). Given the specific relevance of the EI-transformational leadership relationship to my study, discussion of it appears in detail separately from the examination of the other consequences of EI.

Academic performance. There are several noteworthy studies on the relationship between ability EI and academic performance. Barchard (2003) found that MSCEIT total scores explained 8% of the variance in academic success in her sample of 150 undergraduate students (multiple R^2 = .12, R^2 adj = .08), but the correlation was not statistically significant when controlling for verbal SAT. Lyons and Schneider (2005)

found that the understanding emotions factor on the MSCEIT positively related to performance on math-test items (r = .48 for males; r =.39 for females, p < .05), and that emotional management positively related to higher performance for male participants (r = .39, p < .01). However, Lyons and Schneider found that the positive correlation disappeared when controlling for general mental ability. In a study with undergraduate college students, Ashkanasy and Dasborough (2003) reported that scores on the MSCEIT correlated positively with multiple-choice exam performance (r = .26, p < .01), as well as overall final grades in a leadership course (r = .20, p < .05). Brackett and Mayer (2003) reported positive correlations between scores on the MSCEIT and college GPA (r = .16, p < .05) and high school graduate rankings (r = .27, p < .001). In the Brackett and Mayer (2003) study, the relationships of MSCEIT scores with high school and college performance were not statistically significant after controlling for verbal SAT scores. The authors concluded that verbal ability might account for the association between EI and academic performance.

A pre-posttest study conducted with a high school population (Gil-Olarte Márquez, Palomera Martín, & Brackett, 2006) contradicted the findings in Barchard (2003) with respect to the incremental validity of the MSCEIT. In the Gil-Olarte et al. (2006) study, ability EI scores collected at the beginning of the school year predicted final grades after controlling for IQ. The partial correlation controlling for verbal ability was positive and statistically significant (r = .43, p < .01). Brackett (as cited by Rivers et al., 2007), later reviewed the Gil-Olarte et al. study and cautioned that adequate testing of

the relationship between ability EI and academic performance requires sample populations with greater variances of IQ scores, noting that the Gil-Olarte et al. study was conducted at a private, elite school rather than a public school.

Mixed model EI measures show weaker outcomes with academic performance compared to ability EI unless longer-term school performance is evaluated as the dependent variable instead of test performance. In two studies by Austin and colleagues (Austin, Evans, Goldwater, & Potter, 2005; Austin, Evans, Magnus, & O'Hanlon, 2007) no statistically significant correlation was found between scores on an author-modified version of the AES, a measure of mixed model EI, and end-of-term exam performance when controlling for gender. However in one of these studies (Austin et al., 2007), peer-ratings of other students' academic ability statistically and positively correlated with EI ($r = .23$, $p = .03$). Petrides, Frederickson, and Furnham (2004) conducted a study correlating scores on the Trait Emotional Intelligence Questionnaire (or TEIQue) with numerous academic outcomes, controlling for IQ and personality. IQ largely explained math and science test-score performances ($\beta = .87$, $t = 44.54$, $p < .01$). However, a second finding in Petrides et al. (2004) was that high EI positively predicted long-term academic performance (measured by end of year grades) in children with low IQ scores ($F(3, 669) = 257.89$, $p < .01$; R^2 adj = .53). In a predictive validity study, Schutte et al. (1998) found that scores on the AES (at that time referred to as the EI 33-item scale) to be a statistically significant predictor of grade-point average $r(63) = .32$, $p < .01$. Petrides et al. explained that self-reflective (questionnaire) measures of EI may have a unique impact

on the interpersonal and citizenship aspects of the scholastic environment, which serve to help students compensate for lower IQ and hence facilitate their school performance with better grade results than those with lower IQ and EI scores. Offerman et al. (2004) echoed the point of view presented in Petrides et al. (2004), and proposed that mixed model EI should be related to academic outcomes for the same reason it is positively connected with workplace outcomes, namely because high-EI employees will demonstrate socio-emotional abilities that include higher levels of confidence, self-control, goal-orientation, adaptability, and discipline.

Health and wellbeing. Individuals scoring high in EI are more likely to report positive well-being, lower stress, and better overall health than those scoring low in EI (Burri, Cherkas, & Spector, 2009; Carmeli, Yitzhak-Halevy, & Weisberg, 2009; Costarelli, Demerzi, & Stamou, 2009). In a random sample of 149 Israeli employees working for multiple organizations (Carmeli et al., 2009), EI (measured by the AES) positively correlated with life satisfaction ($r = .40$, $p < .01$), self-acceptance ($r = .25$, $p < .01$), and self-esteem ($r = .43$, $p < .001$). However, EI did not correlate with somatic complaints. In addition, EI accounted for 12% unique variance in self-acceptance and 15% unique variance in self-esteem beyond age and gender.

Trait EI (as measured by the TEIQue) positively correlated with female orgasm (Burri et al., 2009) both in terms of frequency during intercourse ($r = .13$, $p < .001$) and during masturbation ($r = .23$, $p < .001$). Women scoring in the lowest quartile of EI were shown to have a twofold increased risk of Female Orgasmic Disorder (FOD), which

afflicts an estimated 30% of all women. In a study comparing the EQ-i scores of women with disordered eating attitudes (n = 21) and a healthy control group (n = 71), a statistically significant difference was found between groups (Costarelli et al., 2009). The group of women with eating disorders reported lower EQ-i scores compared to healthy women on the EQ-i factors of emotional self-awareness, empathy, interpersonal relationships, stress management, and happiness (all at the $p < .05$ level of significance). EI scores on the WLEIS correlated positively with life satisfaction across all four EI factors, with r's ranging from .17 to .37, (Law et al., 2004). Additionally, the ratings of student EI by their parents was a statistically significant predictor of student life satisfaction self-ratings after controlling for demographic variables and the Big Five personality factors ($\beta = .16$, $p < .05$; $\Delta R^2 = .02$, $p < .01$).

Findings from two additional EI studies included moderate positive correlations between MSCEIT scores and self-reported scales of psychological well-being (Brackett & Mayer, 2003; Lopes et al., 2003). Lopes et al. (2003) found a statistically significant correlation between scores on the managing-emotions factor of the MSCEIT and positive relations with others ($r = .27$, $p < .05$). Brackett and Mayer (2003) found a similar correlation between scores on the MSCEIT and psychological well-being ($r = .28$, $p < .001$), contrasted by a much higher positive correlation between well-being and multiple measures of mixed model EI (with ranges between .70 to .75, depending on the measure). Brackett and Mayer (2003) interpreted the overlap between psychological well-being and mixed model EI as indicative of the high correlation between mixed model EI and

personality in general, especially for individuals scoring higher in extraversion and lower in neuroticism.

Work outcomes. Researchers who examined the relationship between EI and work outcomes have largely focused on job performance (e.g., Ali, Garner, & Magadley, 2012; Farh, Seo, & Tesluk, 2012; Joseph & Newman, 2010; Law et al., 2004; O'Boyle et al., 2011) and job satisfaction (e.g., Donaldson-Feilder & Bond, 2004; Psilopanagioti, Anagnostopoulos, Mourtou, & Niakas, 2012; Zampetakis & Moustakis, 2011). Regarding job performance, Law, Wong, and Song (2004) found that EI predicted the performance ratings of employees by their supervisors after controlling for personality variables. Similarly, Ali et al. (2012) EI explained additional incremental variance in police officer performance after controlling for both cognitive ability and personality. Farh, Seo, and Tesluk (2012) found that EI was positively correlated with teamwork effectiveness and individual job performance ratings, controlling for emotional labor, job complexity, worker demographics, cognitive ability, and personality factors. In two separate meta-analyses (Joseph & Newman, 2010; O'Boyle et al., 2011), EI was positively correlated with job performance after controlling for personality and cognitive ability, with mixed model EI showing stronger correlations compared to ability EI in each case. Joseph and Newman (2010) concluded that care must be taken to interpret statistically significant correlations between EI and job performance due to the likelihood of existing moderators, particularly emotional labor. Other concerns stated in Joseph and Newman

include the limited reliability and construct validity of mixed model EI, and low incremental validity of ability EI over cognitive ability and personality.

The general study findings have largely supported a positive correlation between EI and job satisfaction (e.g., Brunetto et al., 2012; Carmeli, 2003; Psilopanagioti et al., 2012; Sy et al., 2006; Wolfe & Kim, 2013), but there have been some cases in which EI did not significantly relate to job satisfaction (e.g., Donaldson-Feilder & Bond, 2004; Stoneback, 2011). The positive relationship between EI and job satisfaction has been established across a wide range of professions and cultures, including teachers in India (Akhtar & Naureen, 2012), and physicians in Greece (Psilopanagioti et al., 2012) and Taiwan (Weng et al., 2011).

The relationship between EI and work outcomes may be moderated by the degree of emotional labor required to perform the job. Emotional labor was a statistically significant moderator variable in the meta-analytic data found in Joseph and Newman (2010). In their path analysis model, Joseph and Newman found that the coefficient for the relationship between emotional regulation and job performance was stronger for employees with high emotional labor jobs than for employees with low emotional labor jobs. The moderator effect of emotional labor was also statistically significant in a study of EI and job satisfaction (Psilopanagioti et al., 2012). These authors found that emotional labor, as measured through the frequency of emotional surface acting (see Hochschild, 1983/2003/1983), functioned as a both a mediator and moderator of the relationship between EI and job satisfaction. First, in their mediation analysis,

Psilopanagioti et al. (2012) found that higher EI led to lower emotional labor, which in turn led to higher job satisfaction. With respect to their moderation analysis, low EI positively correlated with job satisfaction only when emotional labor was low. In sum, EI seems to be most relevant to work outcomes like job performance and job satisfaction when the emotional labor of the work environment is considered.

Humphrey (2012) proposed that leaders use emotional abilities to influence the work outcomes of employees, in part by reducing the level of emotional frustration employees experience in the course of performing job tasks. This idea is supported by evidence that leader EI is more directly influential for employees with low EI—due to higher susceptibility to frustration—compared to employees with high EI (e.g., Jordan, Ashkanasy, & Hartel, 2002; Sy et al., 2006). For example, Sy et al. (2006) found the positive correlation between leader EI and employee job satisfaction was stronger for employees with low EI than for employees with high EI. The authors proposed that high EI employees are likely to be better self-regulators of emotion, thus requiring less emotional support from others. Jordan et al (2002) demonstrated through coaching interventions that leaders can use EI skills to increase the performance of low EI team members to the same level as high EI teams. Jordan et al. claimed that low EI employees are more susceptible to negative emotions resulting from job insecurity than employees with high EI. As such, low EI employees stand to benefit the most from encouragement, positive feedback, and positive regard from their supervisors.

Additional mediators between leader EI and employee work outcomes have also been identified. For example, in a sample of 218 managers and 640 employees, Yu and Yuan (2008) found the relationship between leader EI and employee job performance was partially mediated by employee satisfaction with their leader. Yu and Yuan proposed that both leaders and employees use their EI abilities to mutually improve the quality of social exchanges between them. In the correlational analysis, Yu and Yuan also found that both employee EI and leader EI were positively related to employee job performance; however, employee EI was a stronger predictor of job performance compared to leader EI. Lam and O'Higgins (2012) found that transformational leadership fully mediated the relationship between leader EI and employee job satisfaction after controlling for gender, age, education, and work experience. Lam and O'Higgins concluded that although leader EI directly influenced the adoption of transformational leadership behavior (leader EI was positively correlated with transformational leadership, $r = .23$, $p < .01$), it was transformational leadership, not EI, that represented the means by which leaders influenced the job satisfaction of their employees.

In sum, EI appears to positively relate to work outcomes above and beyond cognitive ability and personality (Joseph & Newman, 2010; O'Boyle et al., 2011); however the variance attributable to sampling error (47%) in the meta-analysis by O'Boyle et al. (2011) indicated that many moderating variables exist, and a similar sampling error for the managing emotions EI factor (45%) was reported in Joseph and Newman (2010). One well-established moderating variable in this body of literature is

emotional labor (Joseph & Newman, 2010). The specific influence that leader EI has on the work outcomes of employees may be dependent upon the EI of employees (e.g., Jordan, Ashkanasy, & Hartel, 2002; Sy et al., 2006), with low EI employees benefitting more from the EI abilities of their bosses compared to their high EI peers. Findings also indicate that leader EI has a stronger positive relationship with employee job satisfaction than job performance, with the latter being determined more by employee EI than leader EI (Wong & Law, 2002; Yu & Yuan, 2008). Finally, the relationship between leader EI and employee work outcomes appears to operate through mediator variables, with transformational leadership being one of potentially many mediators (Lam & O'Higgins, 2012).

EI and Transformational Leadership

Within the body of EI-leadership literature, researchers have discussed and studied transformational leadership more than any other leadership outcome (Harms & Credé, 2010). In support of the conceptual importance of EI to transformational leadership, Bass (1985a) originally proposed that transformational leaders inspire commitment from employees through their use of positive emotional displays and by managing the unique emotional needs of each person (Bass, 1990b). George (2000) contended that the ability of a leader to appraise the emotion of others accurately is instrumental in generating employee enthusiasm toward work goals. Similarly, Humphrey (2012) proposed that the EI factor of emotional management (the regulation of emotional displays and control of mood) is instrumental to transformational leadership.

Positive relationships between EI and transformational leadership exist in findings from numerous studies (see Walter et al., 2011). In a meta-analysis of EI and transformational leadership involving 62 independent samples, Harms and Credé (2010) found statistically significant positive relationships between EI and transformational leadership. However, the EI-transformational leadership relationship was weaker for ability EI than it was for mixed model EI, indicating a difference between EI constructs. Therefore, my review of the empirical literature encompassing the EI-transformational leadership relationship (i.e. the independent and dependent variables in my study respectively) will follow the recommendations that scholars have made (Daus & Ashkanasy, 2005; Joseph & Newman, 2010; O'Boyle et al., 2011) to organize the discussion according to the theoretical model employed in the research: (a) studies that relied upon the mixed model theoretical framework of EI, and (b) studies that relied upon ability-based EI.

Mixed model EI and transformational leadership. Empirical studies based upon the mixed model theoretical framework rely upon self-reported inventory measures of EI that represent a broad range of traits, competencies, and estimated abilities (e.g., Bar-On, 1997; Bar-On & Parker, 2000; Boyatzis et al., 2000). Findings from the majority of these studies support the positive relationship between EI and transformational leadership (e.g., Barbuto & Burbach, 2006; Barling, Slater, & Kelloway, 2000; Downey et al., 2005; Gardner & Stough, 2002; Hur et al., 2011; Lam & O'Higgins, 2012; Lopez-

Zafra, Garcia-Retamero, & Martos, 2012; Mandell & Pherwani, 2003; Palmer et al., 2003b; Sivanathan & Fekken, 2002; Sosik & Megerian, 1999; Wang & Huang, 2009).

Each of the studies listed above included a cross-sectional analysis of the variables. For example, Barling et al. (2000) found a positive relationship between mixed model EI and transformational leadership ratings by direct reports. Leaders with high EI (above 66th percentile) received higher transformational leadership ratings than leaders with either medium or low EI (below 33rd percentile). Barling et al. also found statistically significant correlations between each of the transformational leadership dimensions and total EI except for one (the dimension of intellectual stimulation). Gardner and Stough (2002) found a statistically significant positive correlation between total EI and transformational leadership ($r = .68$, $p < .01$). Similarly, Beshears (2004; a study including both mixed model and ability EI) found that total mixed model EI positively correlated with transformational leadership ($r = .20$, $p = .01$), as well as the subscale dimensions of inspirational motivation ($r = .26$, $p = .001$) and idealized influence ($r = .21$, $p = .008$).

The majority of studies in which the relationships between mixed model EI and transformational leadership were significant relied upon leader self-reported ratings (e.g., BeShears, 2004; Downey et al., 2005; Gardner & Stough, 2002; Lopez-Zafra et al., 2012; Mandell & Pherwani, 2003; Palmer et al., 2001). Antonakis (2003) criticized study results based on self-reported data for both EI and transformational leadership due to common methods variance bias. When leaders are asked to provide ratings of their own

EI and to rate their personal leadership behavior in a similar manner, it is quite likely that the rater will strive to maintain consistency across different types of ratings (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), which in turn, can bias data results, either upward or downward, and inflate correlational estimates (Antonakis, Bendahan, Jacquart, & Lalive, 2010).

Some studies demonstrating support for the EI-transformational leadership relationship, however, involved ratings of transformational leadership from multiple respondents (i.e. panel ratings), usually by including both subordinate and leader ratings (e.g., Barbuto & Burbach, 2006; Barling et al., 2000; Buford, 2001; Lam & O'Higgins, 2012; Sosik & Megerian, 1999; Wang & Huang, 2009; Webb, 2005). For example, Huang and Wang (2009) combined transformational leadership data from 51 leaders and 252 subordinates. The authors averaged scores from all raters to obtain an aggregate rating of transformational leadership. After controlling for gender, age, and company tenure, leader self-reported EI statistically significantly and positively related to transformational leadership ratings ($\beta = .26$, $p < .05$), explaining 26.4% of the variance in this dependent variable.

Huang and Wang's (2009) findings are similar to the findings of other studies. For example, in Barbuto and Burbach (2006), 80 leaders who were elected officials and 388 of their subordinates rated the leaders. The correlations between subordinate ratings of the leaders' EI and the transformational leadership dimensions of intellectual stimulation and individualized consideration were statistically significant and positive (both rs = .16,

p <.01). In contrast, the correlations between EI and leader self-rated transformational leadership were not significant. Findings from these studies supported the theoretical proposition that EI should relate positively with transformational leadership (Barbuto & Burbach, 2006; Wang & Huang, 2009).

Two studies had multiple source ratings for EI (Hur et al., 2011; Lindebaum & Cartwright, 2010). Hur et al. (2011) included EI ratings from 55 leaders and 859 employees. The authors were specifically interested in the collective perceptions of leader emotional behavior. Because intraclass correlation coefficients were high, the researchers combined all leader and subordinate ratings of EI and transformational leadership to create as single score for each leader. Hur et al found that EI positively correlated with combined leader and subordinate ratings of transformational leadership (r = .46, p < .001). Conversely, Lindebaum and Cartwright (2010) examined but did not find a statistically significant relationship between mixed model EI and transformational leadership.

Of note, debate exists among scholars about whether informant ratings of another individual's EI are valid (Boyatzis et al., 2000; Mayer, Caruso, & Salovey, 2000b). Proponents of other-reported EI (Boyatzis et al., 2000) have argued that measuring others' perceptions of leader social behaviors is more useful than self-reported behaviors when measuring latent tendencies, aptitudes, or potential emotional abilities. Mayer et al. (2000) admitted that the perspective of other raters may provide useful information about the sociability and reputation of the individual being rated. However, Mayer et al.

concluded that accurately rating another person's emotional abilities associated with internal cognitive styles and capacities is not possible. Regardless of whether informant ratings of leader EI are unique and useful (Boyatzis et al., 2000) or invalid (Mayer et al., 2000), interpretation of the findings of studies using multiple source EI should be different based on the ratings source, and with cautious skepticism about the efficacy of informant EI ratings.

In contrast to positive, statistically significant relationships between mixed model EI and transformational leadership present in findings from the majority of investigations, the relationships between mixed model EI and transformational leadership were not statistically significant in five studies (Brown et al., 2005; Cavazotte et al., 2012; Domerchie, 2011; Lindebaum & Cartwright, 2010; Macik-Frey, 2007). One of these studies had an extremely low sample size (N = 13), and thus, was likely low in statistical power (Domerchie, 2011). The remaining four studies relied on multiple source ratings for transformational leadership. Thus, the studies with significant findings frequently involved same-source ratings, and the studies with no statistically significant findings often had multi-source ratings. This pattern corresponds with the pattern reported in meta-analytic findings. In a meta-analysis, Harms and Credé's (2010) found stronger statistically significant EI-transformational leadership relationships for studies with same-source ratings of transformational leadership (k = 33, N = 3,626, ρ = .52) than they did for studies relying on multi-source ratings (k =14, N = 2,013, ρ = .08). It is possible that studies relying on multiple source ratings of transformational leadership are more likely

to have low associations with mixed model EI because they do not have common methods variance bias. Conversely, it is quite likely that studies relying solely on self-ratings for both variables are at greater risk of overstating the relationship between EI and transformational leadership (Antonakis et al., 2010).

One notable criticism of the mixed model EI-transformational leadership literature is potential confound between EI and personality constructs (see discussion in Roberts et al., 2010). This issue is particularly important due to consistent statistically significant correlations between the Big Five personality variables and mixed model EI. For example, De Raad (2005) found that 66% of 437 items drawn from mixed model EI instruments could be re-classified under the Big Five personality framework, notably the factors of agreeableness and neuroticism. In a review by Antonakis et al. (2010), statistically significant relationships were found between mixed model EI and Five Factor personality traits, with multiple *r*s ranging between .48 and .76 depending on the actual measures used. Therefore, when researchers select mixed model EI as a predictor of transformational leadership, the failure to include personality variables as control variables can severely bias findings. For example, after controlling for personality, Cavazotte, Moreno, and Hickman (2012) found that the relationship between mixed model EI and transformational leadership was not statistically significant. Had these authors not controlled for personality, mixed model EI would have been reported as positively correlated with transformational leadership, as was the case in their bivariate analyses ($r = .22$, $p < .05$). Because the vast majority of studies between mixed model EI

and transformational leadership did not control for personality (e.g., Barbuto & Burbach, 2006; Barling et al., 2000; Downey et al., 2005; Gardner & Stough, 2002; Hur et al., 2011; Lam & O'Higgins, 2012; Lopez-Zafra et al., 2012; Mandell & Pherwani, 2003; Palmer et al., 2003b; Sivanathan & Fekken, 2002; Wang & Huang, 2009), it raises the possibility that the findings reported in at least some of these studies may actually reflect the overlap between mixed model EI and personality factors.

There are some additional reasons to explain the lack of statistically significant findings between some studies of mixed model EI and transformational leadership. First, organizational culture and leader role type differences may offer an explanation of for null findings in some studies. Lindebaum and Cartwright (2011; also see Brown et al., 2005) suggested that the emotional nature of the work environment is likely to differ greatly by industry and organizational culture, thus affecting the nature of the relationship between EI and transformational leadership. Mandell and Pherwani (2003) and Lindebaum and Cartwright (2011) proposed that the choice of leader population may have an impact on whether EI is a statistically meaningful predictor of transformational leadership behavior. For example, EI may be less important for leadership roles in construction and manufacturing than it is in industries such as hospitality or retail, in which high emotional labor demands are factor associated with increased job stress (Humphrey, 2012).

Lindebaum and Cartwright (2011) also proposed that failure to find statistically significant relationships between EI and transformational leadership in some studies may

occur because a curvilinear relationship exists between these variables. From this perspective, leaders could have “too much EI” (p. 282). Specifically, managers with high levels of EI may engage in strong displays of emotional intensity associated with their job roles (e.g. intense anger when things go wrong), which may be deleterious to the well-being of themselves and their work associates. This issue of emotional intensity will be addressed in the review of ability EI and transformational leadership which follows.

In sum, although most study authors have found support for the relationship between mixed model EI and transformational leadership, the results are inconsistent. One reason for an inconsistency across findings is that the mixed model construct of EI is not valid (Antonakis et al., 2009). One methodological criticism is that common methods variance has likely caused correlations between EI and transformational leadership to be inflated in some studies (Lindebaum & Cartwright, 2010). Yet another criticism is the lack of discriminant validity between mixed model EI and personality (Matthews et al., 2012; Zeidner, Matthews, & Roberts, 2009), which has led to a call for greater emphasis on ability-based modes of EI in future research (Côté, 2010).

Ability-based EI and transformational leadership. Ability-based EI has both methodological and theoretical advantages over mixed model EI (Côté, 2010). Measurement of Ability-based EI is similar to measurement of general intelligence abilities (Mayer et al., 2000). Specifically, test takers obtain high scores by providing correct answers on a wide range of questions. In contrast, assessment of mixed model EI relies upon survey items of agreement or frequency in which an individual achieves a

high score via self- (or other-) based assessment of a wide range of trait behaviors (e.g., optimism). Thus, methodological advantages of ability-based EI include the avoidance of common methods variance when EI is correlated with other variables derived from self-reported survey data and the avoidance of socially desirable responses to EI test items (Kluemper, 2008). A theoretical advantage of ability EI is the definitional similarity it shares with other measures of human intelligence (Côté, 2010). In contrast, the various definitions found in mixed model EI include a "grab bag of constructs" (Joseph & Newman, 2010, p. 72).

The positive correlation between ability-based EI and transformational leadership has been statistically significant in several studies (e.g., BeShears, 2004; Clarke, 2010; Hebert, 2011; Jin et al., 2008; Kanne, 2005; Leban & Zulauf, 2004; Rubin et al., 2005; Wolf, 2010). Each of these included a cross-sectional analysis of both the ability EI and transformational leadership variables. For example, Leban and Zulauf (2004) found a positive correlation between ability EI the transformational leadership dimension of inspirational motivation ($r = .36$, $p < .05$). They also found that perceiving emotion and using emotion correlated positively with the transformational leadership dimensions of idealized influence ($r = .36$, $p < .05$) and individual consideration ($r = .42$, $p < .05$). Similarly, Clarke (2010) found statistically significant correlations between the factor of using emotions and two dimensions of transformational leadership: idealized influence ($r = .26$, $p < .05$) and individualized consideration ($r = .27$, $p < .05$). Likewise, Kanne

(2005) found a positive correlation between total EI and individualized consideration (r = .38, p < .05).

Ability EI has had statistically significant positive relationships with transformational leadership even when other variables were controlled. Clarke (2010) found that EI related to transformational leaders over the effects of cognitive ability and the personality dimensions of openness and emotional stability. Rubin et al. (2005) found that EI related to transformational leadership when the leader's span of control (i.e. the number of direct reports a leader has), agreeableness, positive affectivity, and negative affectivity were controlled. Although Føllesdal and Hagtvet (2013) failed to find support for the majority of the hypotheses in their study, they found a statistically significant relationship between EI and transformational leadership between the subtasks of perceiving emotions (specifically an ability to perceive the subtle absence of positive emotion in sad faces) beyond the effects of personality and cognitive ability. In sum, cognitive ability or personality variables do not appear to account fully for the relationship between ability EI and transformational leadership by; however, the incremental validity reported tends to be lower than it is for mixed model EI (Harms & Credé, 2010).

Findings from a smaller number of studies did not support the association between ability-based EI and transformational leadership (Kirkland, 2011; Weinberger, 2003, 2009). With adequate sample sizes of leader participants ranging from 138 (Weinberger, 2009) to 271 (Kirkland, 2011), in neither case was low power a determinant

of the failure to find associations. The use of engineering leaders within a single manufacturing organization in Weinberger (2009) may have attenuated the EI-transformational leadership relationship. As discussed in Lindebaum and Cartwright (2011), not every work team or work environment necessarily benefits in team performance or morale from having leaders with high levels of EI. For example, Joseph and Newman (2010) found that in low emotional labor roles, like cigarette factory workers and Air Force mechanics, EI had a weaker relationship with employee job performance than it did in high in emotional labor roles associated with the service sector. In Kirkland's (2011) study, the sample of college students is not representative of experienced, formal leaders, which may have limited the ability to detect statistically significant effects. Thus, the EI-transformational leadership relationship may not have been found in these studies due to methodological limitations.

The failure to find statistically significant relationships between ability based EI and transformational leadership in some studies may also be due to conceptual and methodological issues observed in the literature. Researchers have proposed three general explanations. First, ability EI measures tend to capture declarative knowledge of emotions (the crystal aspects of intelligence) rather than fluid aspects of ability (Côté, 2010; Fiori, 2009). As a result, leaders may be good at conceptualizing emotionally intelligent responses, but not so good at actually regulating their behavior during critical moments of emotional duress (Fiori & Antonakis, 2011), and thus, ability EI may not fully capture the critical aspects of EI most relevant to transformational leadership.

Another explanation is that cognitive ability explains part of the variance of scores on ability-based EI measures such as the MSCEIT, especially measures of verbal ability (Brackett & Mayer, 2003; Mayer et al., 2002). Because cognitive ability itself is a poor predictor of transformational leadership behavior (BeShears, 2004; Nguyen, 2002), if ability EI is merely a redundant measure of general mental ability as some have insisted (Antonakis, 2004), then it is not likely to predict transformational leadership any better than a typical IQ test would. Because ability EI has predicted transformational leadership over the effects of cognitive ability in studies, this argument is not consistent with the empirical evidence.

A third explanation is that the relationship between ability EI and transformational leadership is moderated and mediated by other variables. Rubin et al. (2005) examined extraversion as a possible moderator of the EI-transformational leadership relationship. The authors found that the relationship between EI and transformational leadership was positive among leaders high in extraversion. In contrast, among leaders low in extraversion, EI was unrelated to transformational leadership. The authors explained that extraverted leaders have more frequent interactions with their work associates, which allows them to capitalize on their ability to recognize how others are feeling and react accordingly. Jin, Seo, and Shapiro (2008) examined emotional intensity as a moderator of ability EI and transformational leadership in a sample of MBA students, finding that a positive relationship between participant EI and transformational leadership behavior existed for participants with low rather than high emotional intensity.

However, this study was a conference paper with no data tables or statistics and no indication of the regression step procedures used to test for moderation. Lindebaum and Cartwright (2011) noted the need for more EI-transformational leadership studies that include moderator variables. These authors suggested that instead of exploring categorical variables like gender and age, researchers should consider moral reasoning, organizational culture, the level of leadership, and variables associated with emotional control as potential moderators. Harms and Credé (2010) specifically suggested manager emotional intensity as a potential moderator for future research.

Summary of EI and transformational leadership. According to Walter, Cole, and Humphrey (2011), the body of research on EI and leadership has focused largely on transformational leadership behavior. The majority of studies in this domain provide support for a statistically significant relationship between EI and transformational leadership (Barbuto & Burbach, 2006; Barling et al., 2000; Downey et al., 2005; Gardner & Stough, 2002; Hur et al., 2011; Jin et al., 2008; Lam & O'Higgins, 2012; Lopez-Zafra et al., 2012; Mandell & Pherwani, 2003; Palmer et al., 2003b; Wang & Huang, 2009). The rationale for this relationship as described in many of these studies is based on both EI and transformational leadership theories. Because emotionally intelligent behavior is socially adaptive by nature and essential for fostering positive relationships (Salovey & Mayer, 1990), many researchers believe that EI is predictive of leadership behaviors that are inspiring, encouraging, empathic, and motivating (Ashkanasy & Tse, 2000; Bass & Riggio, 2006; Caruso & Salovey, 2004; George, 2000).

However, in studies with both mixed model EI and self-reported transformational leadership ratings, methodological confounds of common method variance bias and socially desirable responding may account for a part of the association (see discussion in Lindebaum & Cartwright, 2010). The lack of control of personality variables in studies involving mixed model EI (e.g., Barling et al., 2000; Palmer et al., 2001) also creates confounds due to consistent correlations between mixed model EI and Big Five personality variables (Antonakis, 2004; Matthews, Roberts, & Zeidner, 2003; Matthews et al., 2012; Zeidner et al., 2008). The methodological confounds associated with mixed model EI are not present in studies with ability-based EI measures due to the advantage of ability-based EI measurement occurring with a test similar to other forms of intelligence (Côté, 2010; Mayer et al., 2011).

Harms and Credé (2010) found that the EI-transformational leadership relationship was weaker with ability EI than it was with mixed model EI. In addition to the aforementioned methodological issues, explanations for this difference as presented in this review are threefold: (1) that ability EI measures tend to capture declarative knowledge of emotions only (Côté, 2010; Fiori, 2009); (2) that verbal ability explains part of the variance of scores (Brackett & Mayer, 2003; Mayer et al., 2002); (3) that the relationship between EI and transformational leadership is nonlinear, pointing to the need for researchers to investigate moderating variables or curvilinear relationships (e.g., Fiori, 2009; Harms & Credé, 2010; Lindebaum & Cartwright, 2011; Sivanathan & Fekken, 2002).

Affect Intensity

As previously discussed, numerous scholars (e.g., Fiori, 2009; Harms & Credé, 2010; Lindebaum & Cartwright, 2011; Sivanathan & Fekken, 2002) suspect that the relationship between EI and transformational leadership is moderated by other factors. One potential moderator of this relationship is affect intensity. Affect intensity refers to individual differences in the strength and frequency of emotional response to life situations (Diener, Larsen, et al., 1985; Larsen & Diener, 1987). The construct includes the pleasant-unpleasant bipolar dimension of affect (or the hedonic tone), as well as the intensity dimension by which affect is felt (also a bipolar dimension, from high to low levels of activation). People who are high in affect intensity often report both positive and negative emotional events as being equally strong experiences. Larsen and Diener (1985; 1987) found high-affect-intensity individuals are subject to frequent, uncontrollable mood swings, and that intense moods are manifest in their expressed behavior, and are more difficult to regulate and control. High-affect-intensity individuals also revealed a larger variance of positive and negative affect fluctuations (cyclothymia) via daily sampling outcomes (Larsen & Diener, 1985).

Intense affect may attenuate the regulatory aspects of one's emotions beyond what is predictable by EI ability, due to the impact intense affect has on unconscious behavior. For example, leaders who react to co-worker mistakes, product defects, difficult customers, or shipping delays, with intense levels of affect, may find it difficult to control their feelings effectively and thus struggle to manage workplace relationships

in ways others would perceive as positive and motivating (Hochschild, 1983/2003/1983; Humphrey, 2012). Furthermore, leaders who feel intense affect may find it difficult to regulate emotional displays despite their declarative knowledge of emotion (or their "better wisdom") about the potential social consequences a display of emotion may have. Larsen and Diener (1987) stated that high affect intense individuals are compelled to structure their relationships to reinforce frequent, intense displays of emotion. Intense affect also makes the "deep acting" tasks associated with emotional regulation extremely difficult to do (e.g., suppressing fear and expressing confidence and optimism instead), thereby forcing leaders who experience high states of arousal to engage in the far less convincing—and far more stressful—"surface acting" tasks of emotional regulation instead (Hochschild, 2003/1983). Hence, the unconscious emotional regulation function associated with intense affect creates an irresistible force within the individual to compel behavior beyond what is predictable by EI ability (Larsen & Diener, 1987). Affect intensity may function as a switch that inhibits or activates a leader's EI abilities (i.e. the knowledge about emotions) from resulting in desired transformational leadership behaviors; behaviors that are dependent upon the skillful and timely use of emotion to influence others (Ashkanasy & Tse, 2000; George, 2000).

Historical Background

Early contributions to the development of the affect intensity construct include the work of Wessman and Ricks (1966) and Bradburn (1969). These scholars relied upon mood journaling techniques and the collection of daily mood-scale data for capturing

study participants' affect tendencies over time. Wessman and Ricks concluded that day-to-day affective states influence two dimensions: (a) the average hedonic level, which reflects the ratio of positive versus negative affect a person experiences, and (b) the variability of the intensity of affect exhibited. An additional observation that Wessman and Ricks found was that the intensity of emotions became independent from valence over time, meaning that individuals high in affect intensity tend to experience all emotions (positive and negative) more intensely than others (Wessman & Ricks, 1966). Last, with respect to the temporal effects on mood, Wessman and Ricks stated that time-based mood ratios (hedonic tone) captured in the short run most likely represented temporary, cyclical moods based on the individual's current life situation and other environmental phenomenon (e.g., diet, weather, sleep, etc.) whereas arousal tendencies remained consistent.

The earlier findings of Wessman and Ricks (1966) and Bradburn (1969) formed the basis of the initial research by Larsen and his colleagues (Diener, Larsen, et al., 1985; Diener, Sandvik, & Larsen, 1985; Larsen, 1984; Larsen & Diener, 1985; Larsen, Diener, & Emmons, 1986). Larsen and Diener (1985) collected daily data on emotional states from participants using an experience-sampling method (Larsen & Diener, 1985). They discovered that participants who reported strong positive mood changes in reaction to daily life events tended to also experience wide negative mood swings. According to Larsen and Diener (1987), positive and negative affect reflect a bipolar dimension measured by the intensity in which it is felt, rather than two separate unipolar dimensions

of affect, divided according to valence. Larsen and Diener based this structure of affect on the arousal regulation theory.

Arousal Regulation Theory

It has long been theorized that organisms seek equilibrium within a natural range of high/low arousal level to maintain optimal functioning (Hebb, 1955). Personality theorists also proposed that individuals differ with respect to their baseline levels of arousal (Eysenck, 1967) and perpetually engage in self-regulation efforts to maintain it. Based on these fundamental premises, Larsen (1984) and Larsen and Diener (1987) proposed the theory of arousal regulation as an underpinning of the affect intensity construct. A central concept of arousal regulation theory is that individuals differ in their cognitive approaches to achieving sensory homeostasis. Regulation of homeostasis occurs by limbic areas of the brain, which serve as a metaphorical “volume control” to either amplify or augment sensory levels to the baseline in some individuals, and reducing it to the baseline in others (Larsen, 1984; Larsen & Diener, 1987).

There are social and environmental implications associated with arousal baseline differences between persons. Individuals with a high arousal baseline seek to structure relationships and aspects of their surroundings in a way that generates intense, amplified levels of affect (Larsen & Diener, 1987). Conversely, individuals whose arousal responses are low seek to structure relationships in ways that are calm and less differentiated by affect (Larsen & Diener, 1987). Thus, the basis of arousal regulation theory is the premise that individuals have a strong need for environmental self-

representation and the regulation of an arousal level commensurate with their dispositional propensities (Emmons & Diener, 1986).

This dynamic effect of self-regulation within a baseline range is represented in arousal regulation theory by two bipolar dimensions: pleasure-displeasure (hedonic tone), and high-low arousal, or intensity (Larsen & Diener, 1987), also depicted as a continuum of high and low activation level (Russell & Carroll, 1999). One of the first researchers to identify these two basic dimensions of affect in the empirical literature was Russell (1978). Using participant ratings of 264 unique feelings, Russell found words for specific feelings can be consistently represented between raters as degrees of two bipolar dimensions: pleasure and arousal.

Alternate Conceptualization of Affect Intensity

The way that affect intensity is structured according to arousal regulation theory is not the only proposed model. Instead of hedonic tone (pleasant-unpleasant) representing a single bipolar dimension along with many pairs of bipolar affect states (see Judge & Larsen, 2001; Larsen & Diener, 1992), Tellegen, Watson, and Clark (1999a) presented a hierarchical structure of affect. In the hierarchical model, the higher-order factor of bipolar hedonic tone is at the top of the hierarchy (Tellegen, Watson, & Clark, 1999b), with negative and positive affect positioned as second order factors. Some researchers have argued that separating the positive and negative “poles” of hedonic tone into unipolar factors of positive and negative affect, leads to an inaccurate measurement of affect intensity (Green & Salovey, 1999; Russell & Carroll, 1999). For example (see

Cropanzano, Weiss, Hale, & Reb, 2003), when an individual reports feeling an absence of "elation" (or high activation positive affect), we have no idea if this is because the person is calm (low activation positive affect), bored (low activation negative affect) or depressed (high activation negative affect). Russell and Carroll (1999) argued that when mood data is collected according to the bipolar structure of affect intensity, the correlation between negative and positive affect is much higher (r = -.82) compared to data collection based on the unipolar structure, and that the lower negative correlation reported by Tellegen et al. (1999a) of r = -.42 is the result of measurement error. Tellegen and his colleagues reported that negative and positive affect were indeed negatively correlated in their sample (r = -.42) and hence were "not strictly orthogonal" (Tellegen et al., 1999a, p. 307), however the results were interpreted as supportive of the hierarchical structure.

Russell and Carroll (1999) argued that the bipolar structure of hedonic tone and intensity represents the more parsimonious model of the two, but Cropanzano et al. (2003) presented extensive evidence for and against both structures of affect intensity. The decision to use the bipolar structure of hedonic tone (Green & Salovey, 1999; Larsen & Diener, 1987) versus the unipolar, independent dimensions of positive and negative affect (Tellegen et al., 1999a, 1999b; Watson et al., 1988; Zevon & Tellegen, 1982), depends entirely upon the scientific purposes of the investigator, as both represent valid models for depicting the affect intensity construct (see Cropanzano et al., 2003). In my study, it is not the directional valence of affect (i.e. the degree of pleasant versus

unpleasant feeling) but rather the intensity by which affect (both pleasant and unpleasant) is frequently felt by a leader that I proposed to moderate the relationship between the independent and dependent variables. Hence the selection of the parsimonious, bipolar structure of affect was deemed appropriate.

Antecedents of Affect Intensity

Larsen (2009) described the antecedents of affect intensity to include personality, physiology (autonomic nervous system and heart rate arousal), gender, and age. With respect to personality, the two factors that have frequently and consistently positively predicted affect intensity in the literature are extraversion and neuroticism (e.g., Dritschel & Teasdale, 1991; Goldsmith & Walters, 1989; Larsen & Diener, 1987; Williams, 1989). Diener et al. (1985) found that extraversion correlated positively with intensity level but not with hedonic tone, whereas neuroticism correlated positively with hedonic tone but not intensity. Larsen and Augustine (2008) and Larsen and Diener (1987) described affect intensity as a temperament construct altogether distinct from personality, with incremental validity over extraversion and neuroticism.

Several researchers have found relationships between physiological changes (both real and perceived) and affect intensity. Larsen et al. (1986) reported negative, statistically significant relationships between affect intensity and measures of galvanic skin response (i.e., skin conductance due to arousal, r = -.31) and resting heart rate (r = -.26), indicating high affect intensity individuals are underaroused when placed in a calm, stimulus-reduced environment (Larsen et al., 1986). Rash (2011) conducted an

investigation of affect intensity and physical arousal by measuring fluctuations in respiration and heart rate in participants before and during the recall of sad life experiences. Heart rate was negatively related with affect intensity, indicating that individuals who experience affect intensely tend to be under-aroused in the resting state, leading them to experience greater levels of arousal during the recall of sad experiences. In a study on affect intensity and the perception of cardiac stress (Blascovich et al., 1992), affect intensity was negatively related to the accuracy of perceived heart-rate increase, with high affect intensity participants reporting much higher fluctuations to cardiac arousal than those lower in affect intensity. Blascovich et al.'s (1992) finding indicated that individuals high in affect intensity have a diminished ability to gauge visceral changes happening in their bodies. These authors proposed that high affect individuals tend to amplify sensory stimulation greatly in an attempt to match their arousal baseline, but are far less accurate in relating their feelings of arousal to actual, device-recorded physical changes.

Gender and age are also antecedents of affect intensity. Women tend to demonstrate higher levels of affect intensity than men in terms of their recall of past events both in community samples (Seidlitz & Diener, 1998), and in samples of clinical patients (Williams & Barry, 2003). However, Diener, Sandvik, et al. (1985) reported life-span development differences between genders account for this difference, and that by the time women reach middle age, affect intensity differences between genders are no longer statistically significant. Affect intensity drops for both genders as the result of

aging, but the decline for women tends to be steeper. Diener et al. also reported affect intensity tends to peak late in adolescence, which may be due to neuropsychological changes during adolescent development (Goldsmith, Pollak, & Davidson, 2008). The implication for research on affect intensity is that the potential effects of age and gender demographics warrant consideration in the analysis and interpretation of study findings.

Outcomes of Affect Intensity

The overall literature on the outcomes of affect intensity has focused largely in two areas: psychopathology (Bland, Williams, Scharer, & Manning, 2004; Blascovich et al., 1992; Flett & Hewitt, 1995; Henry et al., 2001; Nofzinger et al., 1994; Yen, Zlotnick, & Costello, 2002) and consumer behavior in marketing research (Doucé & Janssens, 2013; Lee, 2010; Moore, 1995; Moore et al., 1995). Affect intensity has been statistically significantly correlated with numerous forms of psychopathology, most notably borderline personality disorder (Bland et al., 2004; Henry et al., 2001; Henry et al., 2008; Yen et al., 2002). In marketing research, affect intensity has predicted consumer purchasing behavior (Doucé & Janssens, 2013), including responses to visual advertising (Moore, 1995; Moore & Harris, 1996; Moore et al., 1995), and an emotional affiliation with specific product brands (Lee, 2010).

The majority of studies on affect intensity and the workplace relied on measures based on the hierarchical model of affect intensity, particularly when the investigators were specifically interested in the impact of negative versus positive affect on variables like workplace satisfaction. For example, in a sample of hospital employees, Agho,

Mueller, and Price (1993) found that positive affect positively correlated with job satisfaction ($r = .44$, $p < .01$), and negative affect negatively correlated with job satisfaction ($r = -.27$, $p < .01$). As is the case with workplace studies in general, leadership studies that included affect intensity as a variable have largely relied on the hierarchical structure of affect, and hence the examination of positive and negative affect (see the review of affect research on leaders by Rajah et al., 2011). Remarkably absent in the organizational empirical literature are studies that specifically examine the influence of the arousal (or activation) level of affect on the behavior of leaders, employees, and work teams as opposed to mood states, which is why there has been a call for more workplace studies exploring the intensity dimension of affect based on arousal regulation theory (Härtel & Page, 2009).

Affect Intensity as a Moderator of EI and Transformational Leadership

Scholars have drawn attention to the need to examine potential moderators of the EI-transformational leadership relationship (see Harms & Credé, 2010; Walter et al., 2011). Affect intensity deserves consideration as a moderator because it serves an emotional regulation function not reflected in ability EI. Although the ability to regulate the direction and intensity of emotion is a part of ability EI, it is likely that ability EI captures this capacity as a matter of declarative knowledge, and does not capture an individual's tendencies to act on that knowledge (Fiori, 2009). EI includes the ability to discern subtle differences between emotions, such as the difference between feeling pensive versus feeling sad, but does not indicate one's actual capacity to feel these

emotions in response to social situations (Mayer et al., 2002). According to Larsen (2009), high affect intensity creates an irresistible force within the individual to compel their behavior and emotional reactions. In a lab experiment, Winkielman et al. (2005) found evidence that unconscious affect states had a priming effect that influenced participant behavior choices. Whereas the conscious knowledge, or "how-to" aspects of EI may predict a leader's ability to express emotions that instill optimism and inspire confidence in followers during stressful moments at work (Bass & Riggio, 2006), the actual capacity to act upon these abilities may be either undermined or augmented, by varying degrees of pre-cognitive affect intensity.

Based on arousal regulation theory, there are two affect dispositions described in Larsen and Diener (1987) that further implicate affect intensity as a potential moderator of the relationship between ability EI and transformational leadership behavior. First, rather than directly empathizing with the feelings of others, high affect intensity individuals have a tendency to personalize their emotions (Larsen & Diener, 1987). For example, if a work associate is grieving the recent loss of a family member, a supervisor with a high arousal baseline is more likely to relate the associate's loss with their own recent losses instead of individually considering the unique emotional impact to the associate and to their work tasks. This dispositional tendency may have an impact on the relationship between EI ability-transformational leadership. The ability to empathize with the feelings of others is associated with the using emotions factor of EI (Mayer et al., 2002). However, different arousal baseline levels (high or low affect intensity) may

augment or attenuate the transfer of this emotional ability onto leadership behaviors that require the individual consideration of each unique follower (Avolio & Bass, 2004).

The second dispositional condition of affect intensity described by Larsen and Diener (1987) is the overgeneralization of emotion, with high affect intensity individuals tending to overgeneralize situations involving the emotions of other people. For example, if a work associate displays anger, a leader with a high arousal baseline is likely to hold the unwarranted belief that anger is a pervasive life theme for that associate (Härtel & Page, 2009). As a result, a leader high in affect intensity would focus on the emotional content of all future interactions by (a) assuming this associate is likely to respond to most situations in the future with anger and (b) displaying more avoidant and passive behavior toward the associate (Flett, Blankstein, & Obertynski, 1996). As with the personalizing disposition, overgeneralizing has very specific ramifications for the relationship between EI ability and transformational leadership. First, the understanding emotions factor of EI includes the ability to accurately predict how emotions change dynamically over time and across situations (Mayer & Salovey, 2002). If a leader is compelled to overgeneralize future interactions with work associates based on individual behaviors, it may cause them to miss objective criteria that emotionally intelligent persons use to accurately assess the emotional states of others. Second, if overgeneralization of others' emotions leads to avoidant and passive social behavior (Flett et al., 1996), then high levels of affect intensity may override EI abilities and cause

avoidant behaviors in diametric opposition to the transformational class of leadership (Bass & Avolio, 2004).

In sum, the ability to effectively recognize, understand, and manage the emotions that arise within oneself, as well as to effectively facilitate the emotions of others in ways that are socially adaptive and beneficial, represents the basic composite of what makes social behavior adaptive, and thus emotionally intelligent (Mayer & Salovey, 1997). Likewise, these emotionally intelligent behaviors serve as a core rationale for associating the EI construct with transformational leadership style behaviors (Ashkanasy & Tse, 2000; George, 2000). Varying levels of affect intensity may impact whether or not leaders are likely to take advantage of their EI abilities to perceive and regulate their own emotions, as well as accurately understand the emotions of their associates and respond appropriately. If high affect intensity leaders are less capable of remaining calm during a crisis, or less able to regulate their own feelings of fear or anger during times of organizational change, strife, or uncertainty, it may impede the ability to draw upon EI and build effective relationships in the workplace. In short, varying degrees of affect intensity may statistically significantly alter the relationship between a leader's ability EI and the adoption of transformational leadership behaviors.

Measurement of Affect Intensity

The Affect Intensity Measure (AIM) is a frequency-based scale of affect intensity developed to represent the important temporal component of arousal and valence measurement without the laborious task of collecting daily mood samples (Larsen &

Diener, 1987), and has become the most popular instrument for measuring the intensity of affect based on arousal regulation theory (Larsen, 2009). The AIM is a 40-item Likert-type scale of frequency (a 6-point scale where 1 = never; 6 = always). The AIM was initially developed through the work of Larsen (1984), with further refinement and validation of the instrument performed by Larsen and Diener (1985), and Larsen, Diener, and Emmons (1986). An extensive review of item selection and instrument validation was provided in Larsen and Diener (1987), and a detailed overview of the AIM is provided in Chapter 3.

Factor Analyses and Versions of the AIM

Proponents of the hierarchical model of affect intensity have sought to define a subscale dimensional structure of the AIM, often in concert with efforts to shorten the original format of 40 items. A 27-item short-form AIM was established by Bryant, Yarnold, and Grimm (1996) to address time and budget constraints without sacrificing predictive power (Moore, Halle, Vandivere, & Mariner, 2002). Bryant et al. (1996) found three subscale dimensions of the AIM: positive intensity and reactivity, negative intensity, and negative reactivity. Although three factors for the short-form AIM existed in findings from other studies (e.g., Bryant et al., 1996; Geuens & de Pelsmacker, 2002; Jones, Leen-Feldner, Olatunji, Reardon, & Hawks, 2009; Mehrotra & Tripathi, 2012; Simonsson-Sarnecki, Lundh, & Törestad, 2000), four factors existed in findings from two other studies (e.g., Goldsmith & Walters, 1989; Weinfurt, Bryant, & Yarnold, 1994), and six factors existed in findings from another (Bagozzi & Moore, 2011).

The short-form version of the AIM has received criticism because 11 of the 13 items that were deleted represented reverse-score items (Bagozzi & Moore, 2011). Although the psychometric value of reverse-scored items is debatable and can be problematic within certain demographic groups (see Barnette, 1999), the uniform elimination of 11 of 13 total reverse-score items represents such an extreme shift in construction from the original AIM scale that may lead participants into different response patterns. Bagozzi and Moore (2011) viewed the near-exclusive removal of reverse-scored items and reliance on the short-form in the factor analysis by Bryant et al., (1996) to be problematic and questioned the validity of the short version of the AIM as well as the resulting three factor analysis.

Using the full set of 40 items in Larsen's (1984) original version of AIM, Bagozzi and Moore (2011) found six distinct subscale factors of affect intensity (general affect intensity, negative affectivity, positive affectivity, guilt, threat to self, and serenity). Larsen (2009) admitted a multi-dimensional AIM may be valid, but did not endorse or favor one factor structure of affect intensity over what Larsen and Diener (1987) reported. Larsen (2009) continued to maintain hedonic tone is unidimensional based on the high correlations between positive and negative intensity, which were -.70 or higher in early foundational studies (Larsen & Diener, 1987; Larsen et al., 1986), and -.52 and -.60 in later studies (Emmons & King, 1989).

Summary and Transition

Statistically significant relationships have been found between EI and job performance and EI and transformational leadership. The EI construct, however, has been criticized because of its many different definitions and measurement approaches, and methodological concerns regarding ways of testing its theorized association with criterion variables. Moreover, despite a longstanding theoretical proposition that EI and transformational leadership relate to one another, findings on the relationship have been mixed in the literature, leading some to speculate the relationship is moderated by other factors. Individual differences in emotional intensity among leaders has been specifically suggested as a moderator of interest for future research on EI and transformational leadership. It has also been proposed that the unconscious, pre-cognitive nature of affect may impact the outcomes of behavior in ways that ability EI cannot predict. Hence, I have proposed that varying levels of affect intensity may attenuate or augment the effects of emotional ability on the social behavior of leaders. The following chapter will include a discussion of the research methodology used in the study, including participant demographics, instrumentation, and data analysis.

Chapter 3: Methodology

Introduction

The purposes of this study were to examine the relationship between EI and transformational leadership, and to assess the moderating effect that affect intensity may have upon that relationship. The study's methodology is set forth in this chapter through the following sections: (a) research design and rationale, (b) methodology, (c) population, (d) sampling and sampling procedures, (e) recruitment procedures, (f) instrumentation and operationalization of constructs, (g) data analysis plan, including research questions and hypotheses (h) threats to validity, and (i) ethical procedures.

Research Design and Rationale

Independent variables include (a) EI measured by the MSCEIT (Mayer et al., 2002), and (b) affect intensity measured through the AIM (Larsen & Diener, 1987). The dependent variable is transformational leadership, measured by the Multifactor Leadership Questionnaire, version 5X (or MLQ-5X; Bass & Avolio, 2004). Based on the nature of the research inquiry—a nonexperimental moderator research design, using a purposive sample of supervisors within the hospitality industry—the collection of quantitative data was determined appropriate for the analysis. The research questions and hypotheses in this study address recommendations that scholars have made (a) to increase understanding of the relationship between EI and transformational leadership by testing moderator effects associated with emotionality/affectivity (Harms & Credé, 2010;

Lindebaum & Cartwright, 2011), and (b) to use ability EI in future organizational research.

Methodology

Target population

This study targeted employees working in a supervisory role within the hospitality industry. The rationale for selecting this population was that high EI is useful for leadership in an industry with a strong customer service model (Humphrey, 2012; Lindebaum & Cartwright, 2011). Hospitality and service-based organizations have job requirements for leaders and team members that include the ability to demonstrate positive regard, empathy, and to regulate emotions to accommodate the needs of others consistently (Humphrey, 2012). Because a large component of the competitive business model of hospitality centers on these competencies as performance criteria, leaders providing a work climate in which these values are consistently modeled and reinforced is imperative (Humphrey, 2012).

Sampling and Sampling Procedures

All manager-level employees (i.e., from front-line supervisor to executive) within one business organization in the hospitality industry located in the southwestern United States were recruited to participate. Data were collected from leader subjects working in a full-time, salary-based role with the organization. Each participant must have worked in a managerial capacity for at least 6 months and have had responsibility for the direct supervision of employees. All qualified participants had to speak English as their primary

language. This criterion was especially pertinent for completing the MSCEIT, as the validation process was based on North American data and native English speakers (Mayer et al., 2002). Each participating leader was asked to complete all three measures of interest (MSCEIT, MLQ-5X, and AIM). Each participant was screened for qualifications based on the purposive sampling frame described in the next section, and the completion of a consent and confidentiality form per standard protocol. The study was based on a nonprobability (convenience) sample. Convenience sampling is common and often a necessary method of recruiting participants (Wallen & Fraenkel, 2001), and scientifically "reasonable and worthwhile" for assessing human behavior using descriptive statistics (Newton & Rudestam, 1999, p. 121).

A power analysis was conducted using G*Power (Buchner, Erdfelder, & Faul, 1997) to determine the number of participants needed in this study (Cohen, 1988). A Pearson correlation coefficient was computed to test the relationship between EI and transformational leadership. For tests of association using Pearson correlations, a moderate correlation between variables was considered meaningful: a moderate effect size estimate is consistent with previous studies examining the correlation between EI and transformational leadership (Hebert, 2011; Lindebaum & Cartwright, 2010; Wolf, 2010). To detect a moderate correlation (r = .30), a sample of 64 analyzable participants was required for a minimum power of .80, the standard convention for rejection of the null hypothesis in the social sciences (Cohen, 1988; Ellis, 2010). Hierarchical multiple linear regression was used to test moderation. To achieve power of .80 given a medium

effect size (f^2= .15) and an alpha level of .05, a minimum sample size of 85 was required to detect a statistically significant model (G*Power; Buchner et al., 1997).

Procedures for Recruitment, Participation, and Data Collection

Recruitment. Senior management within the target organization was asked for permission to approach and recruit supervisor-level employees to participate in this study. All management personnel had an equal opportunity to participate in the study as long as they met the sampling frame criteria and had online access including an email account to complete the test and survey instruments successfully.

Participation. Each leader participant submitted their consent for study inclusion via email. The letter inviting participants to consent appears in the appendix (Appendix A). Each participant received a description of the study, as well as instructions for participation and completion of the study. The participants were not required to engage in any exit procedures and could exit the study at any point in time.

Demographic data. Study participants answered a set of questions related to age, gender, race, level of education, and years of managerial experience (see Appendix B). Whenever possible, questions were structured to yield continuous variables (i.e., exact age versus age group; exact years of experience, etc.). Post hoc analyses were conducted to assess statistically significant differences on the dependent variable with respect to participant demographic characteristics. Demographic characteristics for which statistically significant relationships existed across were revisited as control variables in the post hoc analysis of Hypotheses 1 and 2.

Data collection. The researcher performed all data collection online through two log-in portals. The first log-in portal provided the (a) description of the study, (b) participation instructions, (c) demographic questions (see Appendix B), (d) the MLQ-5X (self-report version; only the 20 transformational leadership questions from the MLQ-5X were analyzed for this study, and (e) the AIM. The second log-in portal enabled leader participants to complete the MSCEIT. All scores and results will be held strictly confidential, and no individual data will be shared with the organization or with other persons. Each instrument (MSCEIT, MLQ-5X, and AIM) are valid and reliable instruments, thus a pilot study was not deemed necessary. However, a brief test was conducted for the purposes of identifying user-based problems, including a test of log-in procedures and exportation of raw data. Raw data are stored on a laptop computer with external drive back-up. All online data access was guarded by encryption and secure passwords, with software firewall protection.

Instrumentation and Operationalization of Constructs

The independent variables (EI and affect intensity) and dependent variable (transformational leadership) were measured using standardized instruments that have been shown to be valid and reliable for measuring their respective constructs (Bass & Avolio, 2004; Larsen & Diener, 1987; Mayer et al., 2002). Permissions required for each instrument have been obtained (see Appendix C).

Emotional intelligence. Emotional intelligence was measured using the Mayer Salovey Caruso Emotional Intelligence Test (MSCEIT), which is published by Multi-

Health Systems (MHS) of Toronto, Canada. The test consist of 141 items, using both multiple choice and Likert scale formats containing correct and incorrect answers and selections. The MSCEIT includes instructions for participants to assess the degree of emotion present within an interpersonal or intrapersonal scenario accurately, ranging from *Not at all* to *A Great Deal* (Mayer et al., 2002). Sample items for the MSCEIT appear in Appendix D. Table 1 includes the areas, branches, item counts, and tasks. The MSCEIT is for use with adults (17 years and older), requiring an 8th grade reading level (Mayer et al., 2002).

Table 1

MSCEIT Areas, Branch Factors, Item Totals, and Tasks

Area	Branch	Total items	Tasks
Experiential	1: Indentifying	50	A: Faces E: Pictures
	2: Using	30	B: Facilitation F: Sensations
Area	3: Understanding	32	C: Changes G: Blends
	4: Managing	29	D: Emotional Management H: Emotional Relations

Note: From "*MSCEIT User Manual*" by J.D. Mayer, P. Salovey, and D.R. Caruso, p. 8. Copyright 2002 by Multi-Health Systems. Adapted with permission.

Mayer et al. (2002) used aggregate data from 50 locations to obtain a normative sample base of 5000 subjects. Age ranges were 17 to 79, with a mean of 24.13 (*SD* = 9.89). Participants represented four major ethnic/race classifications, with good

representation percentages for each (Mayer et al., 2002). A second data set was collected from 21 experts of human emotion drawn from the International Society for Research in Emotions (ISRE). The general and expert consensus data sets correlated strongly (.88 for V1.1 and .90 for V2.0 of the MSCEIT). This correlation represents both a strength and a weakness of the instrument. On the plus side, it provided strong evidence for the validity and reliability of objective answers to items on the MSCEIT. Mayer et al. (2000) argued logically in favor of the consensus standardization method based on their theoretical concept that emotionally intelligent personal responses based on social cues are adaptive and founded upon evolutionary advantages, just as cognitive intelligence is construed. On the negative side, Larsen and Lerner (2006) reported this scoring method runs counter to psychometric theory. Having a participant earn the maximum number of points for providing the most popular answer on an IQ test runs contrary to how tests of ability are normally constructed and distributed across a population, thus leading to difficulties in making meaningful score distinctions between individuals (Larsen & Lerner, 2006).

Additionally, the high correlation between expert and non-expert consensus led at least one critical review to ask the question “do emotions experts actually exist?”(Fiori & Antonakis, 2011, p. 333). In support of expert ratings as indicative of high ability, Mayer, Salovey, Caruso, and Sitarenios (2003) conducted interrater agreement analyses between expert and general data sets, finding stronger representation of agreement among experts than among the general group expert ratings on the most difficult test items.

Participants completed the MSCEIT online. They logged in to the MHS site with a unique identifier given to them via email; when the test was completed, the researcher received notification via email. Raw data scores were sent to the researcher via download as well as an individual MSCEIT resource report, which was then sent to the individual participant. Researchers can choose two criteria for scoring: (a) general consensus and (b) expert consensus. Based on user manual recommendations the general consensus criterion was used (Mayer et al., 2002). For the purposes of this study, both overall EI score and branch (subscale) scores were used to assess EI ability. The decision to use both total EI (EIQ) and four branch EI scores was based upon different recommendations in the literature. Some scholars recommended using overall EI scores on the MSCEIT instead of four branch scores (Brannick, Wahi, & Goldin, 2011; Rode et al., 2008), whereas Fiori and Antonakis (2011) found that four branch factors were more important to report than overall EIQ. Because of these mixed expert opinions in the recent literature, both the factor (branch) scores and total scores of the MSCEIT were entered into separate regression analyses. To control for issues of multicollinearity between total and branch score EI with respect to the second hypotheses in the study, separate hierarchical regressions will be run for four factor (branch) scores and total MSCEIT (EIQ) scores respectively.

Overall EI is calculated by computing the mean across all eight unadjusted task scores (Mayer et al., 2002). Each of the four branch scores were determined as an average of the two task scores associated with each branch respectively. The area scores are

categorical descriptors of the MSCEIT as opposed to representing a two-factor framework (Palmer et al., 2005; Rossen et al., 2008).

Reliability and validity. The MSCEIT has a full scale reliability of .91, area score reliability of .90 (experiential) and .85 (strategic), and split-half reliability (n = 62) of .86 (Mayer et al., 2003). Full scale, area, and branch reliability estimates were replicated by Palmer et al. (Palmer et al., 2005). Brackett and Mayer (2003) reported a 2-week test-retest reliability of .86 for total EI, which is moderately favorable in comparison with the coefficients of the EQ-i (r = .73) and SREIT (r = .78), which are self-report measures of EI. A study by Mayer et al. (2002) confirmed a total factor EI (EIQ), four branch factors, and eight tasks factor solution. However, a more recent analysis suggests validity for one total EIQ factor only (Brannick et al., 2011), whereas a third study (Fiori & Antonakis, 2011) revealed support for the four branch factors, but not for a total EIQ factor. For this reason, both total and factorial scores are considered in this study.

In an assessment of convergent validity of the MSCEIT with other single measures of emotional ability, Austin (2010) found a positive, statistically significant correlation between the Situational Test of Emotional Understanding (STEU) and the understanding emotions branch of the MSCEIT (r = .44, p < .001). The understanding branch of the MSCEIT also correlated positively with verbal intelligence (r = .21, p <.05), suggesting that the understanding branch of EI may represent a component of crystal intelligence (Austin, 2010). Total MSCEIT score (EIQ) was also found to

correlate positively with the single factor EI measure scores of the Situational Test of Emotional Management or STEM (r =.36, p <.001). and the STEU (r = .33, p < .001).

In a study by Rossen and Kranzler (2009), the MSCEIT showed incremental validity in predicting social deviance when controlling for personality and verbal SAT scores (r = -.20, p <.01). Rossen and Kranzler (2009) also found incremental validity for the MSCEIT in explaining moderate to large amounts of unique variance for predicting alcohol consumption after controlling for cognitive ability and personality, (correlation was negative and statistically significant, R^2 =.04), suggesting that those with higher EI are less likely to abuse alcohol.

For discriminant validity, Brackett and Mayer (2003) found that the MSCEIT showed the highest discriminant validity from the Big Five and verbal SAT scores compared with other measures of EI in their study. They also found the MSCEIT to be negatively correlated with a scale for social deviance (r = -.27, p < .001). Mayer et al. (2002) reported a negative correlation between the MSCEIT and neuroticism (r = -.13). Mayer et al. (2004) referred to the MSCEIT as “surprisingly distinct” (p. 203) from cognitive ability by merit of low overlap across all four branches of ability EI. Nevertheless, the inability of EI measures in general to show strong divergence from existing measures of cognitive ability has continued to be a source of criticism (Fiori & Antonakis, 2012). The criteria by which EI is being judged with respect to convergent and discriminant validity may be unrealistically conservative and harsh, considering the recent analysis of construct convergence across the social science literature by Carlson

and Herdman (2012). These authors suggested that even moderate levels of convergence between two measures ($r \leq .50$) should not be interpreted as meaning the measures are non-discriminant proxy measures (i.e., measuring the same domain). Nevertheless, discriminant validity remains an important limitation in the field of EI research despite the general findings that the MSCEIT offers greater distinction from personality and intelligence compared to alternative EI measures.

Transformational Leadership. Transformational leadership was measured using the Multifactor Leadership Questionnaire (MLQ), a 45-item questionnaire published by Mind Garden, Inc. of Menlo Park, California. The MLQ (form 5X), measures three leadership styles and nine subscale dimensions. Items on the MLQ are based upon a 5-point, Likert-type scale of frequency which range from 0 (*not at all*) to 4 (*frequently, if not always*). Sample items appear in Appendix E. Only the 20 items on the MLQ measuring the transformational leadership style and its five associated subscale dimensions were collected for the purposes of this study. The following five transformational leadership subscales each consist of four questions: Idealized Influence Attributed (II-A), Idealized Influence Behavior (II-B); Inspirational Motivation (IM); Intellectual Stimulation (IS); Individual Consideration (IC). The assessment was conducted online via license to reproduce and administer that Mind Garden granted directly. Raw data scores were sent to the researcher via download, and an individual MLQ feedback report is sent to the individual participant. As is the case with all

instruments used in this study, each participant was invited to contact the researcher directly if questions arose. Technical support was offered through Mind Garden.

Reliability and validity. Reliability coefficients for the MLQ were assessed in Den Hartog, Van Muijen, and Koopman (1997, p. 27) with Cronbach's alphas of .95 for transformational leadership, and subscale ranges from .72 (lowest) for inspiration up to .93 for charisma (highest). Heinitz, Liepmann, and Felfe (2005) found internal consistency (Cronbach alphas of .70 or higher) for all five dimensions of the transformational leadership style.

Evidence for the factor structure of the transformational leadership class within the MLQ was established in numerous studies (Antonakis et al., 2003; Judge & Piccolo, 2004). In a study consisting mostly of male insurance executives, Howell and Avolio (1993) reported evidence for a single transformational leadership factor being a better fit than five dimensional subscales. This finding of an overall transformational leadership factor is also found in both Carless (Carless, 1998) and Tracey and Hinkin (Tracey & Hinkin, 1998). Single-class transformational leadership (e.g., total transformational leadership scores from the MLQ) have been used in studies due to the high internal consistency of items across the five transformational leadership dimensions (Cronbach $\alpha = .90$; see Johnson, 2009). Heinitz et al. (2005) also concluded that the five transformational leadership dimensions cannot be empirically distinguished, and thus total score transformational leadership is appropriate for conducting future research.

As a test of convergent validity, Rowald and Heinitz (2007) found a positive and statistically significant large correlation ($r = .88$, $p < .01$) between transformational leadership and a competing measure of charismatic leadership (Conger, 1998), leading the authors of the study to proclaim the two measures of transformational leadership and charismatic leadership respectively, to measure largely the same construct. Transformational leadership, as measured by the MLQ, has also correlated positively with leadership role effectiveness indicators, such as subordinate satisfaction ratings, employee motivation, and employee job performance (Bass, 1997). Similar findings were found in Lowe et al. (1996). In this meta-analysis of the MLQ across 39 studies, scores on the transformational leadership scale of the MLQ correlated positively with subordinate satisfaction and job performance ratings. Rowald and Heinitz (2007) found criterion validity for transformational leadership on the MLQ by correlating it positively with profitability ($r = .26$, $p < .05$), finding that transformational leadership explained 14% of profit performance ($\Delta R^2 = .14$) above what was explained by transactional leadership in their regression model.

Divergent validity was established by correlating MLQ scores of transformational leadership with the transactional class of leadership (Rowold & Heinitz, 2007). The researchers found that both transformational scores on the MLQ and charismatic leadership scores on the Conger and Kanungo scales were distinct and separate from transactional leadership. However, the correlation between scores on the MLQ subscales of transformational and transactional leadership was positive and statistically significant

(r = .57, p < .01). In essence, transformational leaders frequently use transactional style behaviors as well as transformational style behaviors in the context of managing their subordinates. A method for comparing correlation coefficients described by Meng, Rosenthal, and Rubin (1992) was used to distinguish differences between dependent correlations, supporting the discriminant validity hypothesis in Rowold and Heinitz (2007). It is important to note that Bass and his colleagues (Bass, 1985a; Bass & Riggio, 2006) have long maintained that transactional leadership behaviors, especially the contingent reward dimension, are important components of effective leadership, and that the relationship between these two distinct leadership styles is not an either/or proposition. Nevertheless, the lack of strong divergence between transformational leadership and the contingent reward dimension of transactional leadership has led some scholars to question the factor structure of the MLQ (see Tracey & Hinkin, 1998).

Carlson and Herdman (2012) indicated that just because two constructs showed moderate to high convergence (e.g., r = .50 to.70), it does not make them proxy measures. The data presented in Carlson and Herdman showed that effect size outcomes and conclusions can vary greatly even when two constructs converge as high as r = .70. Carlson and Herdman concluded by suggesting that when convergent validity is r = .50 or less, the measures are best assumed to be divergent, and that only when r = .70 or greater should convergence be considered. This view, albeit a conservative one in favor of presuming construct divergence, further supports the discriminant validity findings of

transformational leadership (vis-à-vis transactional leadership) in Rowold and Heinitz (2007).

Affect intensity. The AIM (Larsen, 1984) is a 40-item self-report questionnaire that assesses the valence and intensity of emotions experienced across common life situations. Respondents were asked to rate the frequency by which intense emotions across a wide spectrum (joy, sorrow, shame, guilt, elation, etc.) are experienced through a 6-point rating scale of frequency ranging from 1 (*never*) to 6 (*always*). Of the 40 total items, 11 are reverse-key scored for the purpose of reducing response effects. As a measure of personality temperament, Dritschel and Teasdale (1991) and Larsen and Diener (1987) have positively correlated scores on the AIM with neuroticism and extraversion. Larsen reported that the AIM is not susceptible to error artifacts associated with social desirability responses, faking, or misrepresentation (Larsen, 1984, 2009). This online assessment generates no feedback report, nor are results to disclose to participants. Items are scored across one total affect intensity score. Larsen and his colleagues used a frequency scale to capture how often people reported experiencing strong emotions and reactions to life situations. The level of intensity was inferred by the question item itself (e.g., “my happy moods are so strong that I feel like I’m ‘in heaven.’”).

Reliability and validity. In two separate studies, Mooradian (1996) reported estimates or reliability of the AIM to be .92 and .91 respectively, and Moore et al. (1995) reported a coefficient alpha estimate of reliability of .81. Reliability measures for the AIM are also presented in Larsen (2009), with coefficient alphas in four samples ranging

from .90 to .94, and split-half reliability ranging from .73 to .82. In a follow-up study (Larsen & Diener, 1987), 76 participants re-taking the AIM two years later resulted in a correlation between the sets of scores of .75 ($p < .01$). Sample items from the AIM are provided in Appendix F.

According to Larsen (2009), construct validity of the AIM is based on its correlation to daily mood change data, using the experience sampling method (ESM; Weissman & Ricks, 1966; Underwood & Froming, 1980). In Larsen and Diener (1987), daily affect intensity calculated by ESM correlated with total AIM scores at .61. In an earlier study, Larsen and Diener (1985) found that daily parental reports of children's affect intensity correlated with AIM scores at .50 ($n = 74$, $p < .01$). Three additional validity studies were conducted to establish the statistically significant connection between high affect intensity and the tendency to personalize and generalize cognition (Dritschel & Teasdale, 1991; Larsen, Billings, & Cutler, 1996; Larsen, Diener, & Cropanzano, 1987).

Bagozzi and Moore (2011) established convergent validity of the AIM, finding positive correlations between empathy scores and scores on AIM items related to general affectivity and guilt. They also found discriminant validity between the AIM and an18-item scale measuring the need for cognition. Their data analysis revealed a six-factor solution as the best fit, but this new finding has yet to be corroborated. Other studies of the factor structure of the AIM include Bryant et al. (1996) and Weinfurt et al. (1994), each finding a four factor solution to be the best fit. However, the weakness in these

studies compared with Bagozzi and Moore (2011) is that all previous analysis was conducted on a short, 27-item version of the AIM. Another study using a reworded youth version of the AIM, and based on the same short scale item set (Jones, Leen-Feldner, Olatunji, Reardon, & Hawks, 2009) found a three-factor model to be the best fit (RMSEA = .08 and CFI = .94). Because no consensus exists on the dimensionality of the AIM, for the purposes of this study, only total AIM scores were used to determine moderation.

Data Analysis Plan

Software used for analyses. Calculations for descriptive statistics were conducted using IBM SPSS 20 (Norušis, 2011). All assessments and tests were conducted via the Internet, with compatibility for all major browser software platforms (Internet Explorer, Firefox, Chrome, etc.). Data were downloaded as *.csv files and exported into SPSS. Technical support for online questionnaires/tests was provided within each secure assessment portal respectively, and researcher contact information was supplied to each participant by email if questions or additional assistance was needed.

Data screening. All data were screened for outliers prior to analysis. Data were examined to determine if any missing data were missing at random using MCAR (SPSS, 2011). More specifically, Little's MCAR test was conducted to determine whether the pattern of missing data was missing completely at random (MCAR). Further, comparisons between the respondents with missing values and the respondents without missing values on the key study variables was completed to determine if there were

significant differences between the two groups. If the MCAR test revealed that the pattern of missing data was not random, then according to Tabachnick and Fidell, missing data could be imputed via the expected maximization (EM) algorithm in SPSS. In addition, data were examined for outliers; outliers were analyzed, and were either corrected, replaced, or removed from the final data set used for analysis based on standard guidance of remedial action (see Cohen, Cohen, West, & Aiken, 2003, pp. 415-419). The range for all variables was examined to ensure there were no mis-keyed entries or values out of range.

Research Questions and Hypotheses

RQ1: What is the nature of the relationship between EI (total scale and subscale) and total transformational leadership scores?

Null hypothesis ($H_0$1): EI will not relate positively to transformational leadership.

Research hypothesis (Ha1): EI will relate positively to transformational leadership.

RQ2: Does affect intensity moderate the relationship between EI (total scale and subscale) and total transformational leadership scores?

Null hypothesis ($H_0$2): affect intensity will not moderate the relationship between EI and transformational leadership.

Research hypothesis (Ha2): affect intensity will moderate the relationship between EI and transformational leadership.

The study model tested the degree to which EI scores predict transformational leadership scores, and differ across levels of affect intensity as measured by total scores of the moderator variable, Affect Intensity Measure (AIM). To test Hypothesis 2, Pearson correlation coefficient analyses were conducted to test the relationships between EI (total and branch scores) and transformational leadership. I used multiple regression to test Hypothesis 2. Although it is presumed that the relationship between X and Y is statistically significant, this is not necessary for moderation with variable Z to occur (Kenny, 2011). To test Hypothesis 2, I used multiple regression to test for moderator effects (Baron & Kenny, 1986). For this analysis, the predictor (X) was total EI, the moderator (Z) was affect intensity, and the dependent variable (Y) was transformational leadership. To avoid multicollinearity, a separate regression was conducted in which the predictors (X) were EI branch scores. To show moderation, it must be demonstrated that affect intensity influenced the strength or direction of the association between EI and transformational leadership (Bennett, 2000). A proposed alpha level of $p < .05$ was established to determine statistical significance. In the hierarchical regression model, the predictor variables were entered in the first two blocks and the interaction term was entered in the third block (Jose, 2013).

To ensure appropriate rigor is applied to multiple regression testing, numerous assumptions must be addressed and met (Tabachnick & Fidell, 2007). First, to check for the assumption of normal distribution, tests of skewness and kurtosis were conducted. Second, the assumption of homoscedasticity must be met by plotting MLQ score

residuals over values of EI and affect intensity respectively to test for the constancy of variance. This test ensures that regression coefficients are not biased due to inconsistent variances across the scatterplots. Third, correlations between EI (total score and factor scores) and affect intensity were checked for potential multicollinearity. The predictor and moderator variables were centered prior to testing for moderation in order to conform with a longstanding convention (e.g., Aiken & West, 1991; Frazier et al., 2004; Jaccard & Turrisi, 2003; Kenny, 2011; West, Aiken, & Krull, 1996). The purpose for this preparation step is to mitigate potential multicollinearity between the product terms of the predictor and moderator variables (Baron & Kenny, 1986; Kenny, 2011). However, it should be noted that the overwhelming consensus of more recent authors (Hayes, 2013; Jose, 2013) is that the practice of centering variables is mathematically unnecessary and thus entirely optional.

The predictor variables were entered in blocks 1 and 2 respectively, and the interaction term was entered in the final block, as suggested by Jose (2013). Due to the likelihood of a high correlation between the four EI branches and the total EI score, separate hierarchical regressions were calculated to test the second hypotheses of moderation. The first hierarchical regression model included the total EI score and affect intensity as the moderator variable. The subsequent hierarchical regression models examined the four EI branches as predictors and affect intensity as the moderator variable. Moderation was determined according to methods established in Baron and Kenny (1986) when both predictor and moderator are continuous variables. This analysis

includes a determination of what type of moderation occurred. For example, it is possible affect intensity was a threshold moderator instead of a classic linear moderator, meaning that the effect of X on Y (i.e., the relationship between EI and transformational leadership) changed when the moderating variable Z is greater (or less than) a specific cut-off point in. A commonly recommended procedure is to use one standard deviation above and below the mean as cut-off points (Hayes, 2013; Jose, 2013).

Threats to Validity

An important threat to external validity in this study relates to the use of a convenience sample (Cook & Campbell, 1979). In any convenience sampling design, including purposive sampling, the ability of the researcher to generalize findings is limited, as it is more difficult to rule out confounding and extraneous variables when random assignment is not used. Individuals who voluntarily took the time to participate in a study may differ from the general target population of hospitality leaders in substantive ways. For example, they may have a higher EI than the general leader population.

The type of applied research conducted in I-O psychology routinely requires data collection from organizations as opposed to closed university lab settings. Applied research must be conducted in a way that is both equitable and ethical, in which every leader in the organization has equal and voluntary access to participate and to receive the potential benefits of receiving a personal EI and leadership style report. Equal access to benefits, as well as voluntary, confidential participation have been identified as critical

requisites of ethical research in workplace organizations, even though it may lead to fewer opportunities to use control group designs (Lowman, 2006)

The most important threat to internal validity is related to the instrumentation of the MSCEIT. One important theoretical critique of the MSCEIT is that it performs better at detecting low EI in test subjects than it does high EI (Roberts et al., 2010). In part, this is traced back to the potential psychometric weakness of using general and expert consensus ratings to norm the MSCEIT total and scale scores (Mayer et al., 2002). An additional weakness of the MSCEIT instrument, is its tendency to capture maximal EI performance as opposed to typical EI performance, especially for the emotional management factor, which has led to attempts to design new performance EI instruments (Freudenthaler & Neubauer, 2007).

This threat of instrumentation is not unique to this study, and may be partly implicated for the largely mixed findings in the literature regarding the theorized connection between EI and leadership. This threat provides a potential design strength and rationale for conducting a moderator analysis. One of the important outcomes offered in this study is the assessment of how affect (as a measure of typical emotional reaction) may be used in future studies of ability EI; measuring typical performance data, and thus providing superior predictive correlations between ability EI and a wide range of outcome variables. The best way to combat problems of internal and external validity related to selection and population is through careful monitoring of group demographic

differences for multicollinearity, specifically in the analysis of residuals using post-hoc analysis testing (Newton & Rudestam, 1999).

Additional threats of response style bias have been identified specifically in studies involving transformational leadership (Moors, 2012). Measurement of transformational leadership relies on self-reported data, which are subject to acquiescence response style bias, and extreme response style biases. The acquiescence response style bias occurs when people score themselves high on survey items because they agree with the statements, not because it reflects the frequency of their own behavior. The extreme response style bias occurs when individuals do not use the full range of response categories, but prefer to go for the extremes, either as a peculiar individual tendency, or as a matter of perceived social desirability of behaviors. The only method for correcting the biases identified in Moors (2012) involves remedies such as rewording MLQ items (i.e., to re-frame positively and negatively worded items), which was beyond the scope and capacity of this study. Self-report measures in general carry numerous social desirability biases and temporal mood bias (i.e., answers are impacted by the current mood state of the responder). By assuring participants of confidentiality, researchers can reduce response bias tendencies on surveys known to be vulnerable to social desirability perceptions (Bowling, 2005).

Across the history of its use, the AIM is not subject to response biases according to Larsen (2009), and an advantage to the MSCEIT is that it is an ability test as opposed to a self-assessment like most other measures of EI (Mayer et al., 2002). However, self-

reported items on the MLQ are always susceptible to biases due to the social desirability of being a transformational leader (Lievens, Van Geit, & Coetsier, 1997). Social desirability bias may be mitigated (but not eliminated) in this study by holding data results confidential, and making this fact clear in the participant instructions upfront as well as in the verbiage of the participation agreement and consent.

Ethical Procedures

Recruitment of participants was voluntary, based on open participation, and was offered equitably across all leadership levels across each partner organization. Participation could end at any time at the discretion of the participant. Although data collection was not anonymous, all collected data and report documents were held in strict confidence. No personal information, data report files, or individually identifiable data were shared with senior organizational persons or department entities (e.g., Human Resources). The data collection stage lasted 1 month from initial invitation to close. Two reminder messages were sent to all participants who had not completed one or more questionnaire or test, inviting them to participate. All raw data collected were securely stored in the manner described in the data collection section of this chapter, and will be held for 5 years unless specified otherwise by the Walden University IRB (2012). The IRB approval for my study is # 04-10-14-0099485.

Summary

This section described the design methodology used for this study to test the moderator effect of affect intensity in the relationship of EI and transformational

leadership. Data collected from leader participants were analyzed using hierarchical regression with quality tests to detect heteroscedasticity and multicollinearity.

The findings from this study provided in Chapter 4 and discussed in great detail through the final chapter, provide useful social change recommendations regarding the continual improvement of leader and employee emotional health and well-being, improved leader-associate relationship quality, and increased employee satisfaction during times of organizational change.

Chapter 4: Results

Introduction

This study was conducted to contribute new information about the relationship between EI (EI; Salovey & Mayer, 1990)and transformational leadership (Bass, 1985a) by assessing the moderating effect that affect intensity (Larsen & Diener, 1987) may have upon that relationship, specifically through a purposive sample population of hospitality leaders. This chapter includes presentation of the findings of the hypotheses associated with two research questions: (a) What is the nature of the relationship between EI (total scale and subscale) and total transformational leadership scores; and (b) Does affect intensity moderate the relationship between EI (total scale and subscale) and total transformational leadership scores?

This chapter begins with a discussion of the data collection process, including data cleaning and missing data analysis, demographics, and assessment of the sample. Next, are the findings of the study, including the descriptive statistics of the predictor, moderator, and outcome variables, tests of the hypotheses through correlation and hierarchical regression, and follow-up analyses. Tables of the results—which support the data presentation's clarity and efficiency—are included where appropriate (American Psychological Association, 2010).

Data Collection

Prior to data collection, a brief functionality test of the exportation of raw data was conducted from two different host sources: (a) Mind Garden, which hosted the MLQ

and AIM, and (b) Multi-Health Systems, which hosted the MSCEIT. This test was also conducted to address any graphical interface errors, typographical errors, and to run a quality assurance check of the URLs, log-ins, and passwords. The only changes made from the pretest status were to the graphical interface (increasing the default size and font style of the user instructions on the portal site hosted by Mind Garden). Data were collected using self-administered, online surveys and tests that were completed over a period of 1 month. The scales included in this study were the MSCEIT (Mayer et al., 2002), the AIM (Larsen & Diener, 1987), and the MLQ (Bass & Avolio, 2004). Psychometric properties for each instrument were provided and discussed in the Chapter 3 section, Instrumentation and Operationalization of the Constructs.

A pool of 386 leaders from a multi-unit hospitality organization based in the southwestern region of the United States was invited to participate in this study. From the pool of invitees, 224 (58% response rate) provided informed consent. Among the participants, 69 (31%) did not successfully complete any surveys, 6 (2.6%) completed the MSCEIT but not the MLQ or the AIM, and 3 (0.1%) completed the MLQ and the AIM but not the MSCEIT. A total of 146 (66%) of the 224 participants completed all three surveys. Data for this study were collected and analyzed using the Statistical Package for Social Services, v22.0 software program (Norušis, 2011).

Preliminary Data Analyses

Data were first scrutinized for completeness and outliers. Two surveys were removed upon visual inspection because of a large number of missing responses (13 and

16 missing items respectively) from the 20 total MLQ items. For the remaining 144 cases, a univariate test to identify outliers on the MLQ, AIM, and MSCEIT was conducted, based on the method described in Hoaglin and Iglewicz (1987). This process entails subtracting the 25th percentile score value from the 75th percentile score value for each variable, and then multiplying the resulting figure by a factor of 2.2. The resulting figure is then subtracted from the 25th percentile score to determine the low-bound cutoff, and added to the 75th percentile score to determine the high-bound cutoff point. This method is very similar to using three standard deviations from either side of the mean to determine outliers which is a procedure commonly recommended (see, Newton & Rudestam, 1999; Tukey, 1977)

However, using computer simulation tests, Hoaglin and Iglewicz (1987) found their method to be more precise than cutoff points using three standard deviations and Tukey's standard boxplot criteria (Tukey, 1977) when applied to sample sizes greater than 80. Using the Hoaglin and Iglewicz method, two additional cases were identified and removed as outliers: one due to a transformational leadership raw score below the MLQ lower bound cut-off raw score of 32, and a second case due to an affect intensity score below the lower bound cut-off score of 95.

Data were again scrutinized to ensure that any missing data were random, and to check for violations of the assumptions of normality due to skewness and kurtosis (Tabachnick & Fidell, 2007). From the final set of 142 cases, missing data occurred for items associated with the transformational leadership scale of the MLQ (1.4% total

missing). Some missing data were expected on the MLQ, as it offers a non-response option built into the scale (Bass & Avolio, 2004). Hence, by design, the MLQ provides participants with the option to report that they do not know the frequency by which they engage in a specific leader behavior. Therefore, Little's missing completely at random (MCAR) test (Little, 1988) was conducted specifically on the MLQ data (20 transformational leadership scale items), with the result indicating that missing data was statistically nonsignificant and thus presumed to be missing at random (Chi-Square = 191.240, df = 166, α = .087). Because missing data was minimal, manual imputation was conducted using the median-replacement technique (Acuna & Rodriguez, 2004), rather than the expected maximization algorithm technique in SPSS.

All scales had distribution characteristics that were acceptable with respect to skewness (< 1) and kurtosis (< 2), according to the guidance found in Tabachnick and Fidell (2007) with respect to sample sizes of 100 or more cases, and *z*-score distribution tables and rules of thumb for curve analysis found in Cramer and Howitt (2004). A visual inspection of histograms was made for each variable to assess the shape of their distributions against a normal curve. Each variable distribution approximated a normal curve, with the exception of Branch 3 EI (Understanding Emotions) and transformational leadership, which were both slightly leptokurtic (kurtosis > 1.00) due to the high volume of scores at or near the mean. Table 2 presents each of the scales and descriptive statistics of central tendency, variability, distribution, and reliability, using Cronbach’s alpha.

Table 2

Central Tendency, Standard Deviation, Skewness, Kurtosis, and Reliability

Scale	*M*	*SD*	Median	Skewness	Kurtosis	Reliability
Total EI	99.10	11.36	99.39	-.29	.15	.96
Perceiving emotion	102.30	14.00	101.42	-.10	.60	.91
Using emotion	97.31	12.60	97.44	-.09	.30	.87
Understanding motion	95.36	9.75	94.37	-.57	1.34	.91
Managing emotion	99.55	9.15	100.76	-.78	.75	.84
Affect intensity	141.02	19.41	142.50	-.15	-.78	.88
Transformational leadership	63.78	8.13	64.00	-.60	1.03	.84

Note. EI = emotional intelligence.

Results

Descriptive Results

Demographic descriptors consisted of gender, age, race, education, and managerial experience. The results are presented in Table 3. Overall, of the 142 participants, there were 102 men (71.8) and 40 women (28.2%). The sample was predominantly male, with a distribution similar to the U.S. Census 2010 data (70.8% men and 29.2% women) for operations and general management level positions in the workplace (U.S. Census Bureau, 2010). The mean age for the total sample was 35.19 years (*SD* = 6.92), with the mean age for men being 35.54 (*SD* = 7.12), and 34.28 (*SD* = 6.68) for women.

With respect to race, the sample was largely White/Caucasian, which is also similar to the 2010 U.S. Census data for general and/or operations managers (81.2%). Of the non-white participants in the study sample, Hispanics had the largest representation, followed by Black and Asian. Regarding the data for level of education, the largest participant demographic was college graduates, with 62.0% of the total sample having completed at least Bachelor's degree. The final category of demographic data was the length of time in a supervisory role. The median length of time for the total sample was 10 years, ranging from as little as 6 months to as many as 35 years worth of experience. Table 3 provides a breakdown of each demographic by number and percentage.

Inferential Statistical Results

Relationship between EI and transformational leadership. Pearson product-moment correlations were performed to test the first null hypothesis ($H_0 1$) that EI scores (total and branch scores respectively) would not be positively correlated with transformational leadership. Total EI scores were positively, and statistically significantly, correlated with transformational leadership ($r = .22$, $p < .01$). Thus, the null hypothesis that total EI scores would not be positively correlated with transformational leadership was rejected. As total EI scores increased, so did scores on transformational leadership.

Table 3

Frequencies and Percentages for Categorical Variables

	n	%
Gender		
Men	102	71.8
Women	40	28.2
Age		
Mean	35.09	
Median	34.00	
Ethnicity/race		
White/Caucasian	121	85.2
Hispanic	8	5.6
Black/African Amer.	4	2.8
Asian	4	2.8
Native Amer./Alaskan	3	2.1
Other/unspec.	2	1.4
Education		
HS graduate	6	4.2
Trade technical	2	1.4
Some college	39	27.5
Associate degree	7	4.9
Bachelor's degree	71	50.0
Graduate/prof.	17	12.0
Supervisory exp. (years)		
Mean	11.49	
Median	10.00	

Note. Amer. = American. Unspec. = unspecified. H.S. = high school. Prof. = professional. Exp. = experience

Branch EI scores for perceiving emotion were not statistically significantly correlated with transformational leadership (r = .12, p =.17). Thus, the null hypothesis that perceiving emotion branch scores would not be positively correlated with transformational leadership was not rejected. Branch EI scores for using emotion were not statistically significantly correlated with transformational leadership (r = .14, p =.10). Thus, the null hypothesis that using emotion branch scores would not be positively correlated with transformational leadership was not rejected. Branch EI scores for understanding emotion were not statistically significantly correlated with transformational leadership (r = .06, p =.48). Thus, the null hypothesis that understanding emotion branch scores would not be positively correlated with transformational leadership was not rejected. Therefore, the perceiving, using, and understanding emotion branch abilities were found to be unrelated with transformational leadership scores.

Table 4

Pearson Product-Moment Correlations Between Predictor and Outcome Variables

	1	2	3	4	5	6	7
1. Total EI	--						
2. Perceiving emotion	.71**	--					
3. Using emotion	.76**	.39**	--				
4. Understanding emotion	.62**	.18*	.33**	--			
5. Managing emotion	.66**	.23**	.42**	.30**	--		
6. Affect intensity	.10	.02	.14	-.05	.15	--	
7. Transformational leadership	.22**	.12	.14	.06	.32**	.13	--

* p < .05. ** p < .01.
Note. EI = emotional intelligence.

Branch EI scores for managing emotion were positively, and statistically significantly correlated with transformational leadership ($r = .32$, $p < .01$). Thus, the null hypothesis that managing emotion branch scores would not be positively correlated with transformational leadership was rejected. As managing emotion scores increased, so did scores on transformational leadership. Correlations for all predictor and outcome variables are provided in Table 4.

Affect intensity as a moderator of EI and transformational leadership. Two moderated multiple regression analyses were performed to test the second null hypothesis ($H_0 2$) that affect intensity would not moderate the relationship between EI (total and branch scale scores, respectively) and transformational leadership. To conduct these analyses, the method for conducting hierarchical moderated regression in the case of continuous moderator variable was used (Jose, 2013). For the first regression analysis, total EI was entered in the first step of the regression analysis, and affect intensity was then entered in the second step. The interaction term between total EI and affect intensity was created via the TRANSFORM and COMPUTE VARIABLE command in SPSS to multiply both predictors together. This interaction term variable was entered in the third and final step of the analysis.

Prior to conducting the analysis, a test of the general assumptions of regression was performed. A Durbin-Watson statistic was used to test the independence of residuals. The resulting value of 1.94 was not statistically significant for a sample size less than 150 with two predictors in the regression (Savin & White, 1977). Next, visual analyses were

conducted to test for the assumptions of linearity and homoscedasticity respectively. The predictor variables showed approximate linear relationships with the dependent variable in a partial plot inspection. With respect to homoscedasticity, standardized residuals displayed an equal distribution across all predicted values of the dependent variable in a visual inspection of the scatter plot (Tabachnick & Fidell, 2007). Finally, a check for multicollinearity was performed, with collinearity tolerances for variables reporting acceptable values greater than .20 (see O'Brien, 2007). As shown in Table 5, the interaction term was not statistically significant. This indicates that affect intensity did not moderate the relationship between total EI and transformational leadership.

Table 5

Statistical Output of Moderated Regression to Assess the Effect of Affect Intensity on the Total EI-to-Transformational Leadership Relationship

	Unstandardized coefficients		Standardized coefficients			
	b	*SE*	β	*t*	*p*	ΔR^2
Step 1					.01	.05
Total EI	.16	.06	.22	2.65	.01	
Step 2					.01	.01
Total EI	.15	.06	.21	2.50	.01	
Affect intensity	.05	.04	.11	1.31	.19	
Step 3					.01	.02
Total EI	.15	.06	.21	2.57	.01	
Affect Intensity	.04	.03	.11	1.29	.20	
EI*Affect Intensity	-.01	.003	-.15	-1.86	.07	

Note. EI = Emotional Intelligence. Total R^2 = .08.

For the second regression analysis, the four branch score subscales of EI were entered in the first step of the regression analysis, and affect intensity was then entered in the second step. The four interaction terms between perceiving EI, using EI, understanding EI, and managing EI and affect intensity were created via the TRANSFORM and COMPUTE VARIABLE command in SPSS to multiply the predictors together respectively. These interaction term variables were entered in the third and final step of the analysis.

Prior to conducting the analysis, a test of the general assumptions of regression was performed. A Durbin-Watson statistic was used to test the independence of residuals. The resulting value of 1.92 was not statistically significant (Savin & White, 1977). Next, visual analyses were conducted to test for the assumptions of linearity and homoscedasticity respectively. The predictor variables showed approximate linear relationships with the dependent variable in partial plot inspections. With respect to homoscedasticity, standardized residuals displayed an equal distribution across all predicted values of the dependent variable in a visual inspection of the scatter plot (Tabachnick & Fidell, 2007). Finally, a check for multicollinearity was performed, with collinearity tolerances for all variables reporting acceptable values greater than .20 (see O'Brien, 2007). As shown in Table 6, none of the interaction terms were statistically significant. This indicates that affect intensity did not moderate the relationship between branch score EI and transformational leadership

Table 6

Statistical Output of Moderated Regression to Assess the Effect of Affect Intensity on the Branch Score EI-to-Transformational Leadership Relationship

	Unstandardized coefficients		Standardized coefficients			
	b	*SE*	β	*t*	*p*	ΔR^2
Step 1					.003	.11
Perceiving EI	.03	.05	.05	.53	.60	
Using EI	.00	.06	.00	-.01	.99	
Understanding EI	-.04	.07	-.05	-.52	.61	
Managing EI	.29	.08	.33	3.61	.001	
Step 2					.005	.01
Perceiving EI	.03	.05	.05	.58	.57	
Using EI	-.01	.06	.01	-.12	.91	
Understanding EI	-.03	.07	-.04	-.40	.69	
Managing EI	.28	.08	.32	3.45	.001	
Affect Intensity	.03	.04	.08	.97	.33	
Step 3					.02	.02
Perceiving EI	.04	.05	. 07	.77	.44	
Using EI	.01	.07	-.02	-.20	.85	
Understanding EI	.03	.07	-.04	-.43	.67	
Managing EI	.29	.08	.33	3.51	.001	
Affect Intensity	.04	.04	.09	.1.02	.31	
Perceiving EI *affect intensity	-.003	.003	-.09	-.94	.35	
Using EI*affect intensity	-.002	.003	-.06	-.54	.59	
Understand EI*affect intensity	-.004	.004	-.10	-1.07	.29	
Managing EI*affect intensity	.001	.004	.04	.35	.72	

Note. Dependent variable: transformational leadership. EI = emotional intelligence. Total R^2: = .14.

Additional Inferential Analysis

As discussed in Chapter 3, additional analyses of the relationship between EI and transformational leadership were conducted via hierarchical regression to test the possibility that demographic variables may explain the statistically significant relationship found between EI and transformational leadership. The demographic for level of education was dichotomized into the following dummy coded variable criteria: bachelor's degree or higher (coded 1) and no bachelor's degree (coded 0). To avoid multicollinearity in multiple regression (Tabachnick & Fidell, 2007), branch EI scores were included in a separate calculation from total EI. Because of the limited variability in race/ethnicity (85.2% White), the racial category was not considered to have utility as a variable, and was not included in the follow-up analysis. Also, because of the high correlation between age and years of supervisory experience ($r = .79$, $p < .01$), the years of supervisory experience was included in favor of using age.

The demographic variables (entered into Block 1) accounted for 7.0% of the variance in the outcome. Supervisory experience was statistically significantly and positively correlated with transformational leadership ($p < .01$). Gender and education were not statistically significant in this step. Total EI scores and total affect intensity were entered into Block 2, and accounted for an additional 10.00% of the variance. Total EI scores ($p < .01$) and affect intensity scores ($p < .05$) were statistically significant. Additionally, gender became a statistically significant factor in the second step ($p < .01$), with women scoring higher in transformational leadership than men. The positive

regression coefficient between total EI and transformational leadership is only partially explained by the demographic variables of supervisory experience and gender. Finally, when the interaction variable of total EI and affect intensity was entered into block 3, it only accounted for an additional 1.00% of the variance.

As might be expected, when branch score EI is substituted for total EI in step two, the calculations and regression results are similar in pattern, although not identical, with Block 2 accounting for an additional 15.00% of the variance. When the four interaction variables of branch EI and affect intensity were entered into block 3, they only accounted for an additional 1.00% of the variance. The degree to which total EI scores are not a perfect match with branch EI score averages is due to how MHS calculates total EI. Instead of being a direct average of branch scores, the total score reflects a converted score based on how the individual performed across all branches compared to the test's normative sample (Mayer, Salovey, & Caruso, 2002). See Tables 7 and 8 for the nonstandardized regression coefficients (*b*), standardized beta weights (β), t statistics, p-values, $\Delta R^2$and total R^2.

Table 7

Statistical Output of Hierarchical Regression (including Total EI scores) to Assess Demographic Control Variables

	Unstandardized coefficients		Standardized coefficients			
	b	*SE*	β	*T*	*p*	ΔR^2
Step 1					.02	.07
Gender	-2.30	1.51	-.13	-1.51	.13	
Education	.08	1.39	.01	.06	.96	
Supervisory experience	.26	.10	.21	2.53	.01	
Step 2					< .001	.10
Gender	-4.34	1.53	-.24	-2.85	.01	
Education	.80	1.34	.05	.60	.55	
Supervisory experience	.27	.10	.22	2.68	.01	
Total EI	.18	.06	.25	3.11	.002	
Affect intensity	.08	.03	.20	2.41	.02	
Step 3					< .001	.01
Gender	-4.16	1.53	-.24	2.73	.01	
Education	.75	1.34	.05	.56	.58	
Supervisory experience	.26	.10	.21	2.55	.01	
Total EI	.18	.06	.26	3.13	.002	
Affect intensity	.18	.03	.19	2.35	.02	
Total EI *affect intensity	-.004	.003	-.11	-1.38	.17	

Note. EI = emotional intelligence. Total R^2 =.18

Table 8

Statistical Output of Hierarchical Regression (including Branch EI scores) to Assess Demographic Control Variables

	Unstandardized Coefficients		Standardized Coefficients			
	b	*SE*	β	*t*	*p*	ΔR^2
Step 1					.02	.07
Gender	-2.30	1.51	-.13	-1.51	.13	
Education	.08	1.39	.01	.06	.96	
Supervisory experience	.26	.10	.21	2.53	.01	
Step 2					< .001	.15
Gender	-4.68	1.51	-.26	-3.11	.002	
Education	1.31	1.33	.08	.98	.33	
Supervisory experience	.22	.10	.18	2.13	.04	
Perceiving emotion	.05	.05	.09	1.06	.29	
Using emotion	.01	.06	.01	.09	.93	
Understanding emotion	-.02	.07	-.02	-.22	.82	
Managing emotion	.28	.08	.31	3.45	.001	
Affect intensity	.07	.03	.17	2.10	.04	
Step 3					< .001	.01
Gender	-4.51	1.53	-.25	-2.96	.004	
Education	1.33	1.35	.08	.99	.33	
Supervisory experience	.20	.10	.17	1.98	.05	
Perceiving emotion	.06	.05	.10	1.16	.25	
Using emotion	-.001	.06	-.002	-.02	.98	
Understanding emotion	-.02	.07	-.02	-.25	.80	
Managing emotion	.28	.08	.32	3.46	.001	
Affect intensity	.07	.04	.18	2.10	.04	
Perceiving EI *affect intensity	-.002	.003	-.06	-.66	.51	
Using EI*Affect Intensity	-.002	.003	-.07	-.67	.50	
Understand EI*Affect Intensity	-.002	.003	-.06	-.68	.50	
Managing EI*Affect Intensity	.002	.004	-.04	-.46	.65	

Note. EI = emotional intelligence. Total R^2 =.23.

Summary

A final convenience sample of managers (N = 142) working within the hospitality industry consented and then responded to the requisite online surveys over a one-month period. The first null hypothesis was that EI (total and branch scores) were not positively correlated with transformational leadership. The null hypothesis was rejected for total score EI and for one branch EI score (managing emotion), as both were found to have a statistically significant, positive correlation with transformational leadership. The null hypothesis was not rejected for the branch EI scores of perceiving emotion, using emotion, and understanding emotion. Initial follow-up analysis revealed that all of the explained variance associated with total EI and transformational leadership was due to the branch EI score managing emotion. A final follow-up analysis assessed the degree to which demographic variables may further explain the relationship between EI and transformational leadership. The resulting regression found that years of supervisory experience and gender explained a small amount of the variance of transformational leadership scores above what could be attributed to total score EI, or the branch EI score managing emotion.

The second null hypothesis stated that affect intensity would not function as a moderator of the relationship between EI and transformational leadership. Affect intensity was not a statistically significant moderator of either total score EI or branch score EI relationships with transformational leadership. The finding via moderated regression therefore does not support rejection of the null.

In Chapter 5, I discuss the findings, recommendations for future research, and the implications for organizational practitioners and positive social change.

Chapter 5: Conclusions

Introduction

One purpose of this study was to examine whether EI predicted transformational leadership in a sample of hospitality managers. A second purpose of the study was to examine whether affect intensity functioned as a moderator of the EI-transformational leadership. The selection of hospitality managers for this study was driven both by recommendations for future research on emotional labor and leadership (Gooty et al., 2010; Humphrey, 2012; Rajah et al., 2011) and by empirical findings (Joseph & Newman, 2010). Whereas Humprhey (2012) proposed the concept that leaders rely on their emotional abilities in workplace settings where emotional labor is high, Joseph and Newman reported evidence that ability-based EI correlated positively with job performance, but only for job functions where emotional labor was rated high.

There is a lack of research in the EI-leadership literature examining individual differences in the emotional intensity of managers (Harms & Credé, 2010), with no studies on record in the peer-reviewed literature that examined both ability-based EI and affect intensity as predictors of transformational leadership. Prior to the data analysis of this study, the only previous research examining the role of manager emotional intensity as a moderating factor of EI and leadership was an unpublished conference paper by Jin et al. (2008), which employed an experience sampling method to assess the short-term mood states of college student leaders. In contrast with the paper by Jin et al., rather than measuring temporal mood state, my study used a dispositional or trait measure of affect

intensity (Larsen & Diener, 1987) and a field sample of managers working in the hospitality industry.

The data for this study was collected from a convenience sample of managers (N = 142), from whom scores on the MSCEIT (Mayer et al., 2002), the MLQ (Bass & Avolio, 2004), and the AIM (Larsen & Diener) were collected. The findings of this quantitative nonexperimental study indicated that there was a positive and statistically significant zero-order correlation between total score EI and self-reported transformational leadership scores. A second positive and statistically significant correlation was found between the branch score EI managing emotion and transformational leadership. In a follow-up analysis, the statistically significant relationship between EI and transformational leadership explained unique variance beyond age, gender, and years of supervisory experience. The findings indicated that there were no statistically significant zero-order correlations between the branch EI scores of perceiving emotion, using emotion, and understanding emotion and transformational leadership. Finally, affect intensity was not found to moderate the relationship between EI (total and branch score) and transformational leadership.

Interpretation of the Findings

As indicated in Chapter 4, one of the two null hypotheses was rejected. With respect to the first null hypothesis (that EI will not relate positively to transformational leadership), the findings of a statistically significant, positive relationship between EI and transformational leadership confirmed the results reported by some previous authors

(e.g., Clarke, 2010; Hur et al., 2011; Leban & Zulauf, 2004), while disconfirming the results reported by others (e.g., Brown et al., 2005; Føllesdal & Hagtvet, 2013; Lindebaum & Cartwright, 2010; Weinberger, 2009). As for the second null hypothesis (affect intensity will not moderate the relationship between EI and transformational relationship), the statistically nonsignificant results of this study are contrary to what was reported in Jin et al. (2008). What follows next is a discussion of the key methodological differences and similarities between this study and previous studies, and an analysis of the overall findings of this study within the context of its scope and theoretical framework.

The positive statistically significant correlation between the EI branch score managing emotion and transformational leadership found in this study supports two basic propositions in the literature. The authors of the MSCEIT along with their colleagues (Mayer, Salovey, Caruso, & Sitarenios, 2001) stated that because of the more advanced and complex nature of the tasks associated with the managing emotion branch of EI, it represents the most practical and arguably the most important set of skills for building interpersonal relationships. Secondly, Humphrey (2012) has proposed that the ability to manage emotions is instrumental to transformational leadership because of the impact emotional labor has on the stress levels of work associates, particularly labor associated with surface acting tasks.

Caruso and Salovey (2004) explained that not every successful manager relies prominently on emotional abilities to build work relationships, and that emotional

abilities represent one of only several ways that people find meaning in a relationship context (e.g., sharing common goals, intellectual interests, or set of moral values). Perhaps the core issue of emotional abilities and effective leadership depends greatly upon whether emotional tasks are a prominent feature of the organizational environment.

There is growing empirical support for Humphrey's propositions on the importance emotional labor in workplace research, particularly the impact of surface acting, which is believed to cause the largest amount of work-related stress (Hochschild 1983/2003). For example, in their meta-analysis, Joseph and Newman (2010) found that ability EI was a statistically significant indicator of work performance in occupations rated by a panel as high in emotional labor, but not a statistically significant predictor of work performance for jobs rated low in emotional labor demand. Therefore, it is possible that the reason why some authors failed to find statistically significant relationships between EI and transformational leadership (e.g. manufacturing plant managers in Weinberger, 2009; construction project managers in Lindebaum & Cartwright, 2010; executive leaders in Føllesdal & Hagtvet, 2013) is due to a lack of day-to-day emotional labor demand in the workplaces from which their samples were taken.

In a study by Wang and Groth (2014), it was shown that when employees were faced with work tasks that forced them to suppress negative emotions, the labor of emotional suppression had a negative impact on customer service satisfaction ratings. Wang and Groth proposed that managers capable of recognizing negative emotional suppression in their employees are more effective at mitigating the long-term effects that

suppression behaviors have on the customer experience. It seems plausible then, that EI skills are more relevant and meaningful for leadership effectiveness in customer-centered work environments.

There are several possible reasons why affect intensity did not function as a statistically significant moderator in my data sample. The most direct and obvious reason being that affect intensity may simply not be a moderator of the EI-transformational leadership relationship. However, differences in leader affect intensity and positivity have been shown to influence employee emotional behaviors and reported levels of happiness (Erez, Johnson, Misangyi, LePine, & Halverson, 2008). That leaders rely on the expression of emotion to intentionally change behavior in their followers is based not only on longstanding theory of transformational leadership (Yukl, 2006), but empirically as well in studies on the effects of leader socio-emotional competency on followers (Casimir & Ng, 2010).

Another possibility for the non-statistically significant finding in this study, is that it resulted from a Type II error due to inadequate power to detect a small moderation effect (Jaccard & Turrisi, 2003; McClelland & Judd, 1993). Even though $N = 142$ was more than adequate for detecting a small-to-moderate effect size ($f^2 = .07$), the resulting *p*-value from the interaction of total EI score and affect intensity still resulted in a statistically non-significant finding ($p < .07$). Although it is speculative to suggest that a larger sample may have resulting in a *p*-value below the .05 threshold, it is nevertheless worth noting that the minimum effect size detection that a sample $N=142$ is capable of

given a regression calculation with three predictors (EI, affect intensity, and the interaction term of both) may not have been sufficient. McClelland and Judd (1993) indicated that effect sizes to detect statistically significant moderation in field samples can end up being very small compared to laboratory samples based on the semi-partial correlations (i.e. increments in R^2 being as low as 1% to 3%).

Although affect intensity clearly did not function as a moderator in the regression analysis conducted with the four branch EI scores included as the independent variable, affect intensity did approach the traditional level of significance ($p < .07$) in the regression model for total EI. Although some experts have argued in favor of using a more lenient alpha level criteria to detect interaction effects (Aguinis & Stone-Romero, 1997), such an approach to statistical significance testing in the behavioral sciences has historically drawn much criticism (Cohen, 1994; Schmidt, 1996), with many experts arguing that p <.05 in null hypothesis testing is already too lenient and problematic. Masicampo and Lalande (2012), in a review of *p*-values reported in three prominent psychology journal articles from 2007 - 2008, found a disproportionate representation of published articles reporting statistical significance with *p*-values barely underneath the .05 threshold (i.e. the largest chi-square distribution residual found in the sample was for *p*-values between .045 and .05). These authors suggested that publication bias and a single-minded drive toward achieving statistical significance might be responsible for the undue number of statistically significant results with *p*-values higher than .045, and presenting serious implications to the integrity of the literature as a result. Finally,

although once again debatable, another important criteria to consider than the cut-off point of .05 for *p*-value alone, is the effect size (Ellis, 2010). Given that my study was only able to detect a moderate effect size, expanding the traditional *p*-value criteria to .10 would be—in this case—a highly speculative venture, one that greatly increases the risk of committing a Type I error.

The only previous attempt in the literature to test emotional intensity as a moderator of EI and transformational leadership was by Jin et al. (2008), who collected daily mood state data from college student leaders ($N = 192$) over a five week period. These authors reported the interaction term of EI and emotional intensity to be statistically significant ($\Delta R^2 = .02$, $t = -2.24$, $p < .05$). However, as a conference presentation, there were no tables or additional statistics to consult. There was also no indication whether the EI and transformational leadership variables were positively correlated prior to calculating the interaction effect of mood state as a moderator. Numerous attempts to contact the authors by email for more information were unreturned. Nevertheless, the results in Jin et al. (2008) indicated that EI was positively correlated with transformational leadership specifically when leader affect intensity was low.

The result in Jin et al. (2008) is consistent with arousal regulation theory given the expected behavior of leaders when arousal baseline is high (Härtel & Page, 2009), specifically the tendency for high affect intensity individuals to personalize and overgeneralize their emotions in social situations. Individuals high in affect intensity

reported frequent difficulty in regulating their emotional expressions, which they experienced as compelling forces (Larsen, 2009). However, it is unclear whether the sample of college student leaders in Jin et al., with an average of 26 months working experience, is an adequate or practical representation of organizational leaders, or whether short-term mood states, which naturally fluctuate in cycles lasting several weeks (Wessman & Ricks, 1966) are valid predictors of one's persistent affect intensity disposition. Younger (student) participants also tend to have higher levels of affect intensity than older adults (Larsen, 2009) which might have skewed the sample toward higher affect intensity compared to a sample with a wider age distribution. Finally, the average number of raters for each leader (4.05, *SD* = 2.33) was below the 8 to 10 raters specified in the MLQ manual (Avolio & Bass, 2004).

Limitations

My study had several notable limitations, some of which are inherent to the collection of data from a convenience sample, specifically the lack of external validity (Cook & Campbell, 1979; Lavrakas, 2008). It is quite likely that the 142 leaders in the final sample not only differ from the general population of leaders, but also differ from those individuals in the total pool of 386 invited leaders who opted not to participate. Despite the external validity limitations associated with nonzero selection probability, in this case there was an intentional, purposive strategy behind the decision to collect a field sample from a live organization within the hospitality industry.

The hospitality industry presents leaders with an emotionally laden work context, wherein their EI abilities are tested frequently in day-to-day interactions with work associates and customers (Scott-Halsell, Shumate, & Blum, 2008). The findings of my study may have some generalizability for hospitality leaders, and may be of modest practical value to Human Resource managers working within the hospitality industry. However, the inability to control for any number of exogenous sources of variance is always a limitation of non-experimental research (Wallen & Fraenkel, 2001).

Another potential limitation of this study associated with external validity is the participation rate. The total response rate of 36.8% is only slightly better than the average participation rate for organizational studies reported in Baruch (1999), which was an analysis of 175 studies collected over a 20-year period. Baruch found that the average participation rate for organizational and management research was 36.1% with a standard deviation of 13.3%, which is less than the overall return rate for all categories of research combined (55.6%). Within the participant pool volunteering their consent to participate, the return rate for my study was higher (58%, or 224 out of 386), and it is possible that some of the 162 busy leaders who did not volunteer their consent, did not even notice or otherwise open the e-mailed invitation. Due to concerns related to protecting confidentiality, an extra email communication step to collect informed consent (rather than collecting consent online within the survey portal) was deemed necessary. This additional second step of communication most likely lowered the total number of responders.

There were also limitations associated with self-reported MLQ data. Subordinate ratings of transformational leadership would have been a less biased indicator of leadership style compared with self-reported results (Avolio & Bass, 2004). In this specific case, there were realistic barriers against using subordinate data. The use of subordinate ratings would have substantially increased the cost of conducting the research not only for the researcher in terms of licenses, but more importantly, it would have created a substantial labor cost to the organization, particularly due to the inclusion of several thousand non-exempt (hourly) employees. Additionally, because many subordinates at the unit level of the organization are also minors, this approach would have raised additional ethical concerns.

The biggest deterrent against the use of subordinate ratings was practical. According to Avolio and Bass (2004), the ideal number of overall raters for each leader is between 8 to 10, with at least 3 of the raters being subordinates. In the case with the partner organization, it would have made adequate data collection impossible for many middle level leaders who have only one or two formal direct reports, and for unit level supervisors with many subordinate raters under 18 years of age. This would have created additional statistical and ethical challenges due to multiple configurations of responder levels, different numbers of subordinates per leader, inadequate total number of responders per leader, and a mix of adult and minor raters.

The lack of additional control variables is yet another limitation. Although researchers using MSCEIT data have historically reported much smaller correlations with

personality measures than other EI instrument do (Brackett et al., 2006), cognitive ability would most likely have explained at least some of the statistically significant correlation between the branch EI score managing emotion and transformational leadership (expected correlations ranging from .30 to .40; Mayer, Salovey, & Caruso, 2002). Because the MSCEIT is construed as a mode of human intelligence, a moderate correlation with other measures of intelligence is reasonable evidence of both convergent and discriminant validity (Carlson & Herdman, 2012).

One argument against the inclusion of additional measures of intelligence is that a critical exploration of the incremental and/or discriminant validity of the MSCEIT from other measures of intelligence was outside the scope of research interest. Another argument against adding more control measures in general is the practical impact it would have had on participant response rates in my field sample. Because the MSCEIT takes participants anywhere from 30 to 60 minutes to complete (on top of the time needed to complete the MLQ and AIM measures), adding yet another log-in scheme and additional task time requirements would risk an increase in participation burden (Groves, Cialdini, & Couper, 1992) and lower response rates, which could have compromised sample size and power.

Finally, there are psychometric limitations associated with the MSCEIT instrument that are important to mention. The most serious psychometric challenge issued against the MSCEIT is the consensus scoring method. Respondents receive the most points on the test for selecting an answer for which there is the most agreement with the

group norm of choice (either the general or expert consensus group). As a result, items that offer the least amount of discrimination end up being weighted the most, meaning that the most "intelligent" answer also happens to be the most popular answer (Fiori & Antonakis, 2011).

Another challenge issued against the MSCEIT, is that the test likely measures how individuals might perform assuming their best behavior, rather than measuring how they are most likely to perform on a regular basis (Fiori, 2009; Fiori et al., 2014). This distinction has been referred to as a the maximal versus typical performance of emotional tasks (Freudenthaler & Neubauer, 2007). The MSCEIT, then, may best represent a measure of crystallized emotional ability rather than fluid differences of emotional information processing ability between individuals (Fiori et al., 2014). There are limited options for alternative ability-based EI measures. The only other ability-based EI option is the Diagnostic Analysis of Nonverbal Accuracy (DANVA; Norwiki & Duke, 2004), which measures only the perceiving emotion factor of EI. Conversely, the adoption of a mixed model measure of EI would create common methods bias with the leader MLQ data, thus creating a very serious limitation in exchange for overcoming any notable psychometric shortcomings associated with the MSCEIT. To overcome this limitation, the MLQ ratings of subordinates would have to have been substituted for leader self-ratings and this has been noted in the future recommendations below. In sum, emotional abilities are exceptionally difficult to measure, and the MSCEIT remains the best

instrument currently available for ability-based EI even according to its staunchest critics (Fiori et al., 2014; Roberts et al., 2010).

Recommendations

Future organizational researchers should carefully consider the workplace environment in which ability EI is being used as a predictor variable. In workplace environments where emotional surface acting tasks represents a limited scope of day-to-day job task requirements, EI is not likely to be a critical component of leadership effectiveness, and the meta-analysis by Joseph and Newman (2010) presented ample statistical evidence and additional explanation. EI skills are more important for leaders working in environments in which their emotional competencies are frequently put to the test and where emotional relationships with customers are critical to the bottom line. Hochschild (1983/2003) provides some useful criteria, stating that the ability to regulate emotions is a core job competency for workers in environments where positive emotions represent the currency of the business—that is, where emotions are a core part of what customers are buying, especially when their repeat business depends on it.

Based on the current lack of studies, more research is required on differences in affect intensity between leaders as moderating and mediating factors of EI and leadership outcomes. If this study were to be replicated, in addition to increasing sample size, it may be useful to focus on leader individual differences in negative affect (NA) and positive affect (PA) in addition to magnitude differences of intensity. In the most recent factor analysis of the AIM, Bagozzi and Moore (2011) found that the AIM is composed of six

discrete factors of affect. In addition to finding support for separate NA and PA factors on the AIM, Bagozzi and Moore also found evidence for factors that they labeled as guilt, serenity, threat to self, and finally, a factor of general intensity (the amplitude of one's feelings regardless of valence). It is also possible to consider using a temporal mood state instrument like the PANAS (Watson et al., 1988). An example of a future study might be an examination of the degree to which NA and PA function as moderators of the EI-transformational leadership.

Researchers may also want to explore the degree to which affect differences are positively or negatively correlated with one or more of the five dimensions of transformational leadership, or the additional two classes depicted by the full-range leadership model (lassiez faire and transactional leadership). For example: investigating the degree to which leader negative emotion predicts the frequency of passive-avoidant leader behavior may provide information on how a specific emotions like fear and anger serves to influence anti-social or disengagement behaviors by leaders, which are hallmark features of the laissez-faire class of leadership (Avolio & Bass, 2004). Leader emotion and laissez-faire style behaviors may have an impact on employee emotional states, and Härtel and Page (2009) can be consulted for additional insight, as they offer an extensive discussion on the behavioral effects associated with leader emotional crossover.

Another potential suggestion for future research is to include additional or alternative measures of EI, such as the Diagnostic Analysis of Nonverbal Accuracy (DANVA; Norwiki & Duke, 2004) for ability-based EI measurement, or conversely, to

examine whether affect intensity functions as a moderator of mixed-model EI and transformational leadership. The latter recommendation would require a critical modification to the study methodology, specifically related to the collection of transformational leadership data. A large number of previous studies examining the relationship between mixed model EI and transformational leadership (Domerchie, 2011; Downey et al., 2005; Gardner & Stough, 2002; Lopez-Zafra et al., 2012; Mandell & Pherwani, 2003; Palmer, Gardner, & Stough, 2003a; Palmer et al., 2001) have paired leader mixed model EI with self-reported leader MLQ data. Lindebaum and Cartwright (2010) sharply criticized this approach due to common methods bias. Following the recommendation for avoiding common methods bias found in Podsakoff et al. (2003), future research relying on mixed model EI should collect subordinate ratings of transformational leadership, either in addition to or in place of leader self-ratings.

Finally, based on a recent item-level analysis of the MSCEIT (Fiori et al., 2014), organizational researchers using the MSCEIT as an instrument to measure EI may want to specifically analyze the impact of low EI on leadership behavior and the effectiveness outcome scores on the MLQ. In their analysis, Fiori et al. found that the four branches of the MSCEIT are best suited for discriminating individuals at the low end of EI ability rather than high levels of ability. As a result, the MSCEIT may be a more useful instrument for subsamples of participants with below average EI.

Social Change Implications

Leaders are challenged on a daily basis to create a work environment in which employment is engaging, motivating and emotionally rewarding, and this is particularly true within industries in which positive social behavior is directly linked to financial performance (Scott-Halsell et al., 2008). A more thorough understanding of the ways in which emotional skills of leaders are linked to performance outcomes will help organizations not only improve leader selection criteria, but also improve the effectiveness of leadership development efforts, and improve vital follower outcomes like employee engagement. Ongoing research by Gallup (2013) on the state of the American workforce from 2010 to 2012 indicates that 70% of employees are either not engaged or actively disengaged and unhappy in their work, with the conservative cost estimate of unmotivated and unhappy employees tallying over $450 billion per year. The selection, development, and promotion of leaders who demonstrate an ability to increase employee engagement levels has a very real consequence on the financial performance of their organizations, not to mention the happiness and career fulfillment of the people within them.

Another compelling social change implication is the evidence that the emotional well-being of leaders predicts a wide range health outcomes including cardiac health (Steinbrecher & Bennett, 2003). EI in particular has been positively correlated with healthy eating habits, self-reported levels of happiness (Costarelli et al., 2009), life satisfaction (Law et al., 2004), and psychological well-being (Lopes et al., 2003). The

number of findings that report statistically significant correlations between EI and health outcomes provide compelling evidence that EI should remain an important consideration for Human Resource and talent management professionals to include when evaluating the emotional well-being of their workforce. Given the financial costs associated with unhappy workers (Gallup, 2013), the emotional management competencies of leaders is critical in workplace environments where emotional stressors are commonplace.

Although the findings of my study offered no indication of leader affect intensity moderating the relationship between EI and transformational leadership, the study of the impact that leader affect has on employees remains a recommended area of future leadership research and positive social change (Gooty et al., 2010). For example, leader affect disposition may function to counteract consequences of employee affect, especially for individuals high in NA (Hochwarter, Zellars, Perrewé, & Harrison, 1999). High NA employees are susceptible to interpreting their work environment negatively and with stress reactivity in high work demand situations (O'Brien, Terry, & Jimmieson, 2008). In order to resolve their high level of stress, high NA employees spend more time and energy on coping strategies than those low in NA, and over time, are more vulnerable to job strain (O'Brien et al., 2008).

Conclusion

Business organizations rely on the performance of its human capital to win customers and create shareholder value. This is particularly true for businesses where the emotional attachment and connection customers have with employees represents a

substantive component of what customers are willing to pay for (Hochschild, 1983/2003). Therefore, it falls upon the shoulders of leaders to ensure that their followers are engaged, inspired, and positively motivated to perform their jobs from a perspective of socio-emotional evaluation as well as an evaluation of their technical ability. The construct of leadership most often affiliated with emotional inspiration in the scientific literature is the transformational style of leadership (Harms & Credé, 2010). In addition to motivational outcomes, transformational leadership is a statistically valid predictor of employee job performance at the individual (Hoffman et al., 2011), and team level of analysis (Lim & Ployhart, 2004; Özaralli, 2003).

Given the desirability for service organizations to promote transformational leadership, the challenge has been for senior leaders and Human Resource professionals to accurately identify and select new leaders who embody those behavioral qualities, or to instill them into existing leaders through development efforts. EI has been long promoted as a predictor of transformational leadership (Megerian & Sosik, 1997). Over the years that followed, many attempts have been made to demonstrate a relationship between the construct of EI and transformational leadership, with mixed results.

The data collected from my study were used to examine the nature of the EI-transformational relationship by including a purposive sampling context of managers from the hospitality industry, and to examine the degree to which affect intensity might function as a moderator of the relationship. The results of my study indicated there is a statistically significant, positive correlation between EI and transformational leadership in

a sample of managers within the hospitality industry. However, through post hoc analysis this relationship was explained by the managing emotions branch of EI, and to a much smaller extent, through one demographic variable (years of supervisory experience). Even though the degree to which affect intensity may moderate did not reach a level of statistical significant in this particular sample (p = .065), there continues to be a paucity of studies that examine the impact that affect disposition has on leadership effectiveness (Gooty et al., 2010; Rajah et al., 2011), as well as little research in the literature on effective means for developing emotional management skills. Managing people is in large measure, the art of managing emotions (Caruso & Salovey, 2004). This is particularly true for leaders today who must address the 21st century challenges of ubiquitous organizational change, and a workforce of ever-increasing diversity and multi-generational demography (Szollose, 2010).

In *The Picture of Dorian Gray,* Oscar Wilde (1890/1988, p. 85) wrote "A man who is master of himself can end a sorrow as easily as he can invent a pleasure." Leaders who project calm and demonstrate low affect intense responses even during moments of extreme stress and crisis are more likely to influence employee stress perception through emotional crossover (Härtel & Page, 2009) and emotional contagion (Cherulnik, Donley, Wiewel, & Miller, 2001). One critical example is the life and death of Rick Rescorla on the morning of the attacks on the twin towers, September 11, 2001 (Grunwald, 2001). Rescorla was a Vice President for the Morgan Stanley firm's offices in the south tower. When the hijacked planes hit the north and then the south tower, this leader went into

action immediately to take charge of evacuating all 2,600 Morgan Stanley employees to safety.

Surviving employees offered incredible testimony of Rescorla's ability to project calm during the crisis, and how his demeanor gave strength and confidence to others, ensuring that as many as possible left the building in an orderly fashion. All but 6 of the 2,600 employees made it out of the building safely. Rescorla perished that morning, as he was the very last person to leave. Employees look to leaders' facial expression to judge the sincerity of the emotions they are projecting, particularly whether the leader's facial expressions match the message being delivered (Dasborough & Ashkanasy, 2002). The emotions of leaders matter, because the leaders themselves matter greatly to those of us who choose to follow them. Leadership research will continue to provide many benefits for positive social change, because aside from parents and teachers, few have a greater and more positive impact on the lives of ordinary people than an outstanding boss.

References

Acuna, E., & Rodriguez, C. (2004). The treatment of missing values and its effect on classifier accuracy. In *Classification, clustering, and data mining applications* (pp. 639-647). Berlin, Germany: Springer - Berlin Heidelberg.

Agho, A. O., Mueller, C. W., & Price, J. L. (1993). Determinants of employee job satisfaction: An empirical test of a causal model. *Human Relations, 46*(8), 1007-1027. doi: 10.1177/001872679304600806

Aguinis, H., & Stone-Romero, E. F. (1997). Methodological artifacts in moderated multiple regression and their effects on statistical power. *Journal of Applied Psychology, 82*(1), 192–206. doi: 10.1037/0021-9010.82.1.192

Aiken, L. S., & West, S. G. (1991). *Multiple regression: testing and interpreting interactions*. Thousand Oaks, CA: Sage Publications.

Akhtar, N., & Naureen, S. (2012). An investigation of relationship between emotional intelligence and job satisfaction among female secondary school teachers in private schools of Rawalpindi. *Language in India, 12*(6), 139-150. Retrieved from http://www.languageinindia.com/

Ali, O. E. A., Garner, I., & Magadley, W. (2012). An exploration of the relationship between emotional intelligence and job performance in police organizations. *Journal of Police and Criminal Psychology, 27*(1), 1-8. doi: 10.1007/s11896-011-9088-9

Antonakis, J. (2003). Why 'emotional intelligence' does not predict leadership effectiveness: A comment on Prati, Douglas, Ferris, Ammeter, and Buckley (2003). *International Journal of Organizational Analysis, 11*(4), 355-361. doi: 10.1108/eb028980

Antonakis, J. (2004). On why 'emotional intelligence' will not predict leadership effectiveness beyond IQ or the 'big five': An extension and rejoinder. *Organizational Analysis, 12*(2), 171-182. doi: 10.1108/eb028991

Antonakis, J., Ashkanasy, N. M., & Dasborough, M. T. (2009). Does leadership need emotional intelligence? *The Leadership Quarterly, 20*(2), 247-261. doi: 10.1016/j.leaqua.2009 .01.006

Antonakis, J., Avolio, B. J., & Sivasubramaniam, N. (2003). Context and leadership: An examination of the nine-factor full-range leadership theory using the Multifactor Leadership Questionnaire. *The Leadership Quarterly, 14*(3), 261-295. doi: 10.1016/s1048-9843(03)00030-4

Antonakis, J., Bendahan, S., Jacquart, P., & Lalive, R. (2010). On making causal claims: A review and recommendations. *The Leadership Quarterly, 21*(6), 1086-1120. doi: 10.1016/j.leaqua.2010.10.010

Antonakis, J., & Dietz, J. (2010). Emotional intelligence: On definitions, neuroscience, and marshmallows. *Industrial and Organizational Psychology: Perspectives on Science and Practice, 3*(2), 165-170. doi: 10.1111/j.1754-9434.2010.01219.x

Antonakis, J., & Dietz, J. (2011). More on testing for validity instead of looking for it. *Personality and Individual Differences, 50*(3), 418-421. doi: 10.1016/j.paid.2010.10.008

Ashforth, B. E., & Humphrey, R. H. (1993). Emotional labor in service roles: The influence of identity. *The Academy of Management Review, 18*(1), 88-115. doi: 10.2307/258824

Ashkanasy, N. M., & Dasborough, M. T. (2003). Emotional awareness and emotional intelligence in leadership teaching. *Journal of Education for Business, 79*(1), 18-22. doi: 10.1080/08832320309599082

Ashkanasy, N. M., & Daus, C. S. (2005). Rumors of the death of emotional intelligence in organizational behavior are vastly exaggerated. *Journal of Organizational Behavior, 26*(4), 441-452. doi: 10.1002/job.320

Ashkanasy, N. M., & Humphrey, R. H. (2011). Current emotion research in organizational behavior. *Emotion Review, 3*(2), 214-224. doi: 10.1177/1754073910391684

Ashkanasy, N. M., & Tse, B. (2000). Transformational leadership as management of emotion: A conceptual review. In N. M. Ashkanasy, C. E. Härtel & W. J. Zerbe (Eds.), *Emotions in the workplace: Research, theory, and practice.* (pp. 221-235). Westport, CT: Quorum Books/Greenwood Publishing Group.

American Psychological Association. (2010). *Publication Manual of the American Psychological Association* (6th ed.). Washington, DC: Author.

Austin, E. J. (2010). Measurement of ability emotional intelligence: Results for two new tests. *British Journal of Psychology, 101*(3), 563-578. doi: 10.1348/000712609x474370

Austin, E. J., Evans, P., Goldwater, R., & Potter, V. (2005). A preliminary study of emotional intelligence, empathy and exam performance in first year medical students. *Personality and Individual Differences, 39*(8), 1395-1405. doi: 10.1016/j.paid.2005.04.014

Austin, E. J., Evans, P., Magnus, B., & O'Hanlon, K. (2007). A preliminary study of empathy, emotional intelligence and examination performance in MBChB

students. *Medical Education, 41*(7), 684-689. doi: 10.1111/j.1365-2923.2007.02795.x

Avolio, B. J. (1999). *Full leadership development: Building the vital forces in organizations*. Thousand Oaks, CA: Sage Publications.

Avolio, B. J., & Bass, B. M. (1991). *The full range leadership development programs: basic and advanced manuals*. Binghamton, NY: Bass, Avolio & Associates.

Avolio, B. J., & Bass, B. M. (2004). *Multifactor Leadership Questionnaire: Manual and Sample Set* (3rd ed.). Menlo, CA: Mind Garden, Inc.

Avolio, B. J., Bass, B. M., & Jung, D. I. (1995). *MLQ Multifactor Leadership Questionnaire: technical report*. Redwood City, CA: Mindgarden.

Avolio, B. J., Bass, B. M., & Jung, D. I. (1999). Re-examining the components of transformational and transactional leadership using the Multifactor Leadership Questionnaire. *Journal of Occupational and Organizational Psychology, 72*(4), 441-462. doi: 10.1348/096317999166789

Avolio, B. J., & Yammarino, F. J. (2002). Introduction to, and overview of, transformational and charismatic leadership. In B. J. Avolio & F. J. Yammarino (Eds.), *Transformational and charismatic leadership: The road ahead* (pp. xvii-xxiii). Kidlington, Oxford, United Kingdom: Elsevier Science, Ltd.

Bagozzi, R. P., & Moore, D. J. (2011). On the dimensionality and construct validity of the Affect Intensity Measure. *TPM-Testing, Psychometrics, Methodology in Applied Psychology, 18*(1), 3-18. Retrieved from http://www.tpmap.org/index.htm

Bar-On, R. (1997). *Bar-On Emotional Quotient Inventory: Technical manual*. Toronto, Canada: Multi-Health Systems.

Bar-On, R. (2004). The Bar-On Emotional Quotient Inventory (EQ-i): Rationale, description and psychometric properties. In G. Geher (Ed.), *Measuring emotional intelligence: Common ground and controversy* (pp. 115-145). Hauppauge, NJ: Nova Science.

Bar-On, R., & Parker, J. D. A. (2000). *The handbook of emotional intelligence: Theory, development, assessment, and application at home, school, and in the workplace.* San Francisco, CA: Jossey-Bass.

Barbuto, J. E., Jr., & Burbach, M. E. (2006). The emotional intelligence of transformational leaders: A field study of elected officials. *The Journal of Social Psychology, 146*(1), 51-64. doi: 10.3200/socp.146.1.51-64

Barbuto, J. E., & Story, J. S. (2010). Antecedents of emotional intelligence: An empirical study. *Journal of Leadership Education, 9*(1), 144-154. Retrieved from http://www.leadershipeducators.org

Barchard, K. A. (2003). Does emotional intelligence assist in the prediction of academic success? *Educational and Psychological Measurement, 63*(5), 840-858. doi: 10.1177/0013164403251333

Barling, J., Slater, F., & Kelloway, E. K. (2000). Transformational leadership and emotional intelligence: An exploratory study. *Leadership & Organization Development Journal, 21*(3), 157-161. doi: 10.1108/01437730010325040

Barnette, J. (1999). Nonattending respondent effects on internal consistency of self-administered surveys: A Monte Carlo simulation study. *Educational & Psychological Measurement, 59*, 38-46. doi: 10.1177/0013164499591003

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations.

Journal of Personality and Social Psychology, 51(6), 1173-1182. doi: 10.1037/0022-3514.51.6.1173

Barsky, A., & Kaplan, S. A. (2007). If you feel bad, it's unfair: A quantitative synthesis of affect and organizational justice perceptions. *Journal of Applied Psychology, 92*(1), 286-295. doi: 10.1037/0021-9010.92.1.286

Baruch, Y. (1999). Response rate in academic studies-a comparative analysis. *Human Relations, 52*, 421-438. doi: 10.1177/001872679905200401

Bass, B. M. (1985a). *Leadership and performance beyond expectations*. New York, NY: The Free Press.

Bass, B. M. (1985b). Leadership: Good, better, best. *Organizational Dynamics, 13*(3), 26-40. doi: 10.1016/0090-2616(85)90028-2

Bass, B. M. (1990a). *Bass & Stogdill's handbook of leadership: Theory, research, and managerial applications* (3rd ed.). New York, NY: The Free Press.

Bass, B. M. (1990b). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics, 18*(3), 19-31. doi: 10.1016/0090-2616(90)90061-s

Bass, B. M. (1994). Transformational leadership and team and organizational decision making. In B. M. Bass & B. J. Avolio (Eds.), *Improving organizational effectiveness through transformational leadership* (pp. 104-120). Thousand Oaks, CA: Sage Publications.

Bass, B. M. (1997). Does the transactional-transformational leadership paradigm transcend organizational and national boundaries? *American Psychologist, 52*(2), 130-139. Retrieved from http://www.apa.org/pubs/journals/amp/index.aspx

Bass, B. M. (1999). Two decades of research and development in transformational leadership. *European Journal of Work and Organizational Psychology, 8*(1), 9-32. doi: 10.1080/135943299398410

Bass, B. M., & Avolio, B. J. (1990). *Multifactor Leadership Questionnaire*. Palo Alto, CA: Consulting Psychologists Press.

Bass, B. M., & Avolio, B. J. (1994). *Improving organizational effectiveness through transformational leadership*. Thousand Oaks, CA: Sage Publications.

Bass, B. M., & Avolio, B. J. (1997). *Full range leadership development: Manual for the Multifactor Leadership Questionnaire.* Palo Alto, CA: Mindgarden.

Bass, B. M., & Avolio, B. J. (2004). *Multifactor Leadership Questionnaire: Manual and Sampler Set* (3rd ed.). Menlo Park, CA: Mind Garden.

Bass, B. M., Avolio, B. J., Jung, D. I., & Berson, Y. (2003). Predicting unit performance by assessing transformational and transactional leadership. *Journal of Applied Psychology, 88*(2), 207-218. doi: 10.1037/0021-9010.88.2.207

Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.

Bastian, V. A., Burns, N. R., & Nettelbeck, T. (2005). Emotional intelligence predicts life skills, but not as well as personality and cognitive abilities. *Personality and Individual Differences, 39*(6), 1135-1145. doi: 10.1016/j.paid.2005.04.006

Bennett, D. S., Bendersky, M., & Lewis, M. (2005). Antecedents of emotion knowledge: Predictors of individual differences in young children. *Cognition and Emotion, 19*(3), 375–396. doi: 10.1080/02699930441000201

Bennett, J. A. (2000). Mediator and moderator variables in nursing research: conceptual and statistical differences. *Research In Nursing & Health, 23*(5), 415-420. doi: 10.1002/1098 -240X(200010)23:5<415::AID-NUR8>3.0.CO;2-H

BeShears, R. S. (2004). *The ability of emotional intelligence to predict transformational leadership when personality, affect, and cognitive ability are controlled* (Doctoral dissertation). Retrieved from Dissertations and Theses database. (UMI No. 3151327)

Blake, R. R., & Mouton, J. S. (1964). *The managerial grid: Key orientations for achieving production through people.* Houston: Gulf Publishing Company.

Bland, A. R., Williams, C. A., Scharer, K., & Manning, S. (2004). Emotion processing in borderline personality disorders. *Issues in Mental Health Nursing, 25*(7), 655-672. doi: 10.1080/01612840490486692

Blascovich, J., Brennan, K., Tomaka, J., Kelsey, R. M., Hughes, P., Coad, M. L., & Adlin, R. (1992). Affect intensity and cardiac arousal. *Journal of Personality and Social Psychology, 63*(1), 164-174. doi: 10.1037/0022-3514.63.1.164

Blattner, J., & Bacigalupo, A. (2007). Using emotional intelligence to develop executive leadership and team and organizational development. *Consulting Psychology Journal: Practice and Research, 59*(3), 209-219. doi: 10.1037/1065-9293.59.3.209

Bono, J. E., Foldes, H. J., Vinson, G., & Muros, J. P. (2007). Workplace emotions: The role of supervision and leadership. *Journal of Applied Psychology, 92*(5), 1357–1367. doi: 10.1037/0021-9010.92.5.1357

Bono, J. E., & Judge, T. A. (2004). Personality and transformational and transactional leadership: A meta-analysis. *Journal of Applied Psychology, 89*(5), 901-910. doi: 10.1037/0021-9010.89.5.901

Bowling, A. (2005). Mode of questionnaire administration can have serious effects on data quality. *Journal of Public Health, 27*(3), 281-291. doi: 10.1093/pubmed/fdi031

Boyatzis, R. E., Goleman, D., & Rhee, K. S. (2000). Clustering competence in emotional intelligence: Insights from the Emotional Competence Inventory. In R. Bar-On & J. D. A. Parker (Eds.), *The handbook of emotional intelligence: Theory, development, assessment, and application at home, school, and in the workplace.* (pp. 343-362). San Francisco, CA: Jossey-Bass.

Brackett, M. A., & Mayer, J. D. (2003). Convergent, discriminant, and incremental validity of competing measures of emotional intelligence. *Personality and Social Psychology Bulletin, 29*(9), 1147-1158. doi: 10.1177/0146167203254596

Brackett, M. A., Mayer, J. D., & Warner, R. M. (2004). Emotional intelligence and its relation to everyday behaviour. *Personality and Individual Differences, 36*(6), 1387-1402. doi: 10.1016/s0191-8869(03)00236-8

Brackett, M. A., Rivers, S. E., & Salovey, P. (2011). Emotional intelligence: Implications for personal, social, academic, and workplace success. *Social and Personality Psychology Compass, 5*(1), 88-103. doi: 10.1111/j.1751-9004.2010.00334.x

Brackett, M. A., Rivers, S. E., Shiffman, S., Lerner, N., & Salovey, P. (2006). Relating emotional abilities to social functioning: A comparison of self-report and performance measures of emotional intelligence. *Journal of Personality and Social Psychology, 91*(4), 780-795. doi: 10.1037/0022-3514.91.4.780

Bradberry, T., & Greaves, J. (2009). *Emotional intelligence 2.0* San Diego, CA: TalentSmart.

Bradburn, N. M. (1969). *The structure of psychological well-being*. Chicago, IL: Aldine.

Brannick, M. T., Wahi, M. M., & Goldin, S. B. (2011). Psychometrics of Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) scores. *Psychological Reports, 109*(1), 327-337. doi: 10.2466/03.04.pr0.109.4.327-337

Brody, L. R., & Hall, J. A. (2000). Sex, emotion, and expression. In M. Lewis & J. M. Haviland (Eds.), *Handbook of emotions* (2nd ed., pp. 338-349). New York, NY: Guilford Press.

Brody, N. (2004). What cognitive intelligence is and what emotional intelligence is not. *Psychological Inquiry, 15*(3), 234-238.

Brotheridge, C. M., & Grandey, A., A. (2002). Emotional labor and burnout: comparing two perspectives of "people work." *Journal of Vocational Behavior, 60*, 17-39. doi: 10.1006/jvbe.2001.1815

Brotheridge, C. M., & Lee, R. T. (2008). The emotions of managing: An introduction to the special issue. *Journal of Managerial Psychology, 23*(2), 108-117. doi: 10.1108/02683940810850763

Brown, F. W., Bryant, S. E., & Reilly, M. D. (2005). Does emotional intelligence - as measured by the EQI - influence transformational leadership and/or desirable outcomes? *Leadership & Organization Development Journal, 27*(5), 330-351. doi: 10.1108/01437730610677954

Brown, F. W., & Moshavi, D. (2005). Transformational leadership and emotional intelligence: A potential pathway for an increased understanding of interpersonal

influence. *Journal of Organizational Behavior*, *26*(7), 867-871. doi: 10.1002/job.334

Bruch, H., & Walter, F. (2007). Leadership in context: Investigating hierarchical impacts on transformational leadership. *Leadership & Organization Development Journal, 28*(8), 710-726. doi: 10.1108/01437730710835452

Brunetto, Y., Teo, S. T. T., Shacklock, K., & Farr-Wharton, R. (2012). Emotional intelligence, job satisfaction, well-being and engagement: Explaining organisational commitment and turnover intentions in policing. *Human Resource Management Journal, 22*(4), 428-441. doi: 10.1111/j.1748-8583.2012.00198.x

Bryant, F. B., Yarnold, P. R., & Grimm, L. G. (1996). Toward a measurement model of the Affect Intensity Measure: A three-factor structure. *Journal of Research in Personality, 30*(2), 223-247. doi: 10.1006/jrpe.1996.0015

Buchner, A., Erdfelder, E., & Faul, F. (1997). How to Use G*Power. Retrieved from http://www.psycho.uni-duesseldorf.de/aap/projects/gpower/how_to_use_gpower.html

Buford, B. A. (2001). *Management effectiveness, personality, leadership, and emotional intelligence: A study of the validity evidence of the emotional quotient inventory (EQ-i).* (Doctoral dissertation). Retrieved from Dissertations and Theses database. (UMI No. 3034082)

Burns, J. M. (1978). *Leadership*. New York, NY: Harper & Row.

Burri, A. V., Cherkas, L. M., & Spector, T. D. (2009). Emotional intelligence and its association with orgasmic frequency in women. *Journal of Sexual Medicine*, *6*(7), 1930-1937. doi: 10.1111/j.1743-6109.2009.01297.x

Byrne, J. C., Dominick, P. G., Smither, J. W., & Reilly, R. R. (2007). Examination of the discriminant, convergent, and criterion-related validity of self-ratings on the Emotional Competence Inventory. *International Journal of Selection and Assessment, 15*(3), 341-353. doi: 10.1111/j.1468-2389.2007.00393.x

Caldwell, C., & Dixon, R. (2010). Love, forgiveness, and trust: Critical values of the modern leader. *Journal of Business Ethics, 93*(1), 91-101. doi: 10.1007/s10551-009-0184-z

Carless, S. A. (1998). Assessing the discriminant validity of transformational leader behaviour as measured by the MLQ. *Journal of Occupational and Organizational Psychology, 71*, 353. doi: 10.1111/j.2044-8325.1998.tb00681.x

Carless, S. A. (2001). Assessing the discriminant validity of the Leadership Practices Inventory. *Journal of Occupational and Organizational Psychology, 74*(2), 233-239. doi: 10.1348/096317901167334

Carlson, K. D., & Herdman, A. O. (2012). Understanding the impact of convergent validity on research results. *Organizational Research Methods, 15*(1), 17-32. doi: 10.1177/1094428110392383

Carlyle, T. (1841). On heroes, hero-worship and the heroic in history. Retrieved from http://www.gutenberg.org/etext/1091

Carmeli, A. (2003). The relationship between emotional intelligence and work attitudes, behavior and outcomes: An examination among senior managers. *Journal of Managerial Psychology, 18*(8), 788-813. doi: 10.1108/02683940310511881

Carmeli, A., Yitzhak-Halevy, M., & Weisberg, J. (2009). The relationship between emotional intelligence and psychological wellbeing. *Journal of Managerial Psychology, 24*(1), 66-78. doi: 10.1108/02683940910922546

Carroll, J. B. (1993). *Human cognitive abilities: A survey of factor analytic studies*. New York: Cambridge University Press.

Caruso, D. R., & Salovey, P. (2004). *The emotionally intelligent manager: How to develop and use the four key emotional skills of leadership*. San Francisco, CA: Jossey-Bass.

Casimir, G., & Ng, Y. N. K. (2010). Combinative aspects of leadership style and the interaction between leadership behaviors. *Leadership & Organization Development Journal, 31*(6), 501-517. doi: 10.1108/01437731011070005

Cavazotte, F., Moreno, V., & Hickmann, M. (2012). Effects of leader intelligence, personality and emotional intelligence on transformational leadership and managerial performance. *The Leadership Quarterly, 23*(3), 443-455. doi: 10.1016/j.leaqua.2011.10.003

Census Bureau, U. S. (2010). *detailed census occupation by sex, and race/ethnicity for worksite geography, total Population*. Washington, DC: Retrieved from http://factfinder2 .census.gov

Chamorro-Premuzic, T., Moutafi, J., & Furnham, A. (2005). The relationship between personality traits, subjectively-assessed and fluid intelligence. *Personality and Individual Differences, 38*(7), 1517-1528. doi: 10.1016/j.paid.2004.09.018

Chapin, F. S. (1942). Preliminary standardization of a social insight scale. *American Sociological Review, 7*, 214-228. doi: 10.2307/2085176

Cherniss, C. (2010). Emotional intelligence: Toward clarification of a concept. *Industrial And Organizational Psychology: Perspectives On Science And Practice 3*(2), 110-126. doi: 10.1111/j.1754-9434.2010.01231.x

Cherulnik, P. D., Donley, K. A., Wiewel, T. S. R., & Miller, S. R. (2001). Charisma is contagious: The effect of leaders' charisma on observers' affect. *Journal of Applied Social Psychology, 31*(10), 2149-2159. doi: 10.1111/j.1559-1816.2001.tb00167.x

Clarke, N. (2010). Emotional intelligence and its relationship to transformational leadership and key project manager competences. *Project Management Journal, 41*(2), 5-20. doi: 10.1002/pmj.20162

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Earlbaum Associates.

Cohen, J. (1994). The earth is round ($p < .05$). *American Psychologist, 49*(12), 997-1003. doi: 10.1037/0003-066x.49.12.997

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression correlation analysis for the behavioral sciences* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.

Conger, J. A. (1988). Theoretical foundations of charismatic leadership. In J. A. Conger & R. N. Kanungo (Eds.), *Charismatic leadership: The elusive factor in organizational effectiveness.* (pp. 12-39). San Francisco, CA US: Jossey-Bass.

Conger, J. A. (1989). *The charismatic leader: Beyond the mystique of exceptional leadership*. San Francisco, CA: Jossey-Bass.

Conger, J. A. (1999). Charismatic and transformational leadership in organizations: An insider's perspective on these developing streams of research. *The Leadership Quarterly, 10*(2), 145-179. doi: 10.1016/s1048-9843(99)00012-0

Conger, J. A., & Kanungo, R. N. (1994). Charismatic leadership in organizations: Perceived behavioral attributes and their measurement. *Journal of Organizational Behavior, 15,* 439-452. doi: 10.1002/job.4030150508

Conger, J. A., & Kanungo, R.N. (1998). *Charismatic leadership in organizations*. Thousand Oaks, CA: Sage Publications.

Conger, J. A., & Kanungo, R. N. (1987). Toward a behavioral theory of charismatic leadership in organizational settings. *The Academy of Management Review, 12*(4), 637-647. doi: 10.2307/258069

Conger, J. A., & Kanungo, R. N. (1988). Behavioral dimensions of charismatic leadership *Charismatic leadership: The elusive factor in organizational effectiveness.* (pp. 78-97). San Francisco, CA: Jossey-Bass.

Conger, J. A., & Kanungo, R. N. (1998). *Charismatic leadership in organizations*. Thousand Oaks, CA: Sage Publications, Inc.

Connelly, S., & Ruark, G. (2010). Leadership style and activating potential moderators of the relationships among leader emotional displays and outcomes. *The Leadership Quarterly, 21*(5), 745-764. doi: 10.1016/j.leaqua.2010.07.005

Cook, T. D., & Campbell, D. T. (1979). *Quasi-experimentation: Design and analysis issues*. Boston, MA: Houghton Mifflin Company.

Cooper, R. K., & Sawaf, A. (1996). *Executive EQ*. New York, NY: Grosset/Putnam.

Costarelli, V., Demerzi, M., & Stamou, D. (2009). Disordered eating attitudes in relation to body image and emotional intelligence in young women. *Journal of Human Nutrition and Dietetics, 22*(3), 239-245. doi: 10.1111/j.1365-277X.2009.00949.x

Côté, S. (2010). Taking the 'intelligence' in emotional intelligence seriously. *Industrial and Organizational Psychology: Perspectives on Science and Practice, 3*(2), 127-130. doi: 10.1111/j.1754-9434.2010.01211.x

Cramer, D., & Howitt, D. (2004). *The Sage dictionary of statistics: a practical resource for students in the social sciences*. Thousand Oaks, CA: Sage.

Cropanzano, R., Weiss, H. M., Hale, J. M. S., & Reb, J. (2003). The structure of affect: Reconsidering the relationship between negative and positive affectivity. *Journal of Management, 29*(6), 831-857. doi: 10.1016/s0149-2063(03)00081-3

Damen, F., van Knippenberg, D., & van Knippenberg, B. (2008). Leader affective displays and attributions of charisma: The role of arousal. *Journal of Applied Social Psychology, 38*(10), 2594-2614. doi: 10.1111/j.1559-1816.2008.00405.x

Daniel, M. H. (1997). Intelligence testing: Status and trends. *American Psychologist, 52*(10), 1038-1045. doi: 10.1037/0003-066x.52.10.1038

Dansereau, F., Graen, G., & Haga, W. J. (1975). A vertical dyad linkage approach to leadership within formal organizations: A longitudinal investigation of the role making process. *Organizational Behavior & Human Performance, 13*(1), 46-78. doi: 10.1016/0030-5073(75)90005-7

Dasborough, M. T., & Ashkanasy, N. M. (2002). Emotion and attribution of intentionality in leader-member relationships. *The Leadership Quarterly, 13*(5), 615-634. doi: 10.1016/s1048-9843(02)00147-9

Daus, C. S., & Ashkanasy, N. M. (2005). The case for the ability-based model of emotional intelligence in organizational behavior. *Journal of Organizational Behavior, 26*(4), 453-466. doi: 10.1002/job.321

Dawda, D., & Hart, S. D. (2000). Assessing emotional intelligence: Reliability and validity of the Bar-On Emotional Quotient Inventory (EQ-i) in university students. *Personality and Individual Differences, 28*(4), 797-812. doi: 10.1016/s0191-8869(99)00139-7

De Hoogh, A. H. B., Den Hartog, D. N., & Koopman, P. L. (2005). Linking the big five-factors of personality to charismatic and transactional leadership; perceived dynamic work environment as a moderator. *Journal of Organizational Behavior, 26*(7), 839-865. doi: 10.1002/job.344

De Raad, B. (2005). The trait-coverage of emotional intelligence. *Personality and Individual Differences, 38*(5), 673-687. doi: 10.1016/j.paid.2004.05.022

DeGroot, T., Kiker, D. S., & Cross, T. C. (2000). A Meta-Analysis to Review Organizational Outcomes Related to Charismatic Leadership. *Canadian Journal of Administrative Sciences, 17*(4), 356-371. Retrieved from http://onlinelibrary.wiley.com/journal/10.1002/%28ISSN%291936-4490

Deluga, R. J. (1998). American presidential proactivity, charismatic leadership, and rated performance. *Leadership Quarterly, 9*, 265-291. doi: 10.1016/S1048-9843(98)90030-3

Den Hartog, D. N., De Hoogh, A. H. B., & Keegan, A. E. (2007). The interactive effects of belongingness and charisma on helping and compliance. *Journal of Applied Psychology, 92*(4), 1131-1139. doi: 10.1037/0021-9010.92.4.1131

Den Hartog, D. N., Van Muijen, J. J., & Koopman, P. L. (1997). Transactional versus transformational leadership: An analysis of the MLQ. *Journal Of Occupational And Organizational Psychology, 70*(1), 19-34. doi: 10.1111/j.2044-8325.1997.tb00628.x

Deniz, M. E., Traş, Z., & Aydoğan, D. (2009). An investigation of academic procrastination, locus of control, and emotional intelligence. *Kuram ve Uygulamada Eğitim Bilimleri, 9*(2), 623-632. Retrieved from http://www.scimagojr.com/journalsearch.php?q =19500157110&tip=sid

Diener, E., Larsen, R. J., Levine, S., & Emmons, R. A. (1985). Intensity and frequency: Dimensions underlying positive and negative affect. *Journal of Personality and Social Psychology, 48*(5), 1253-1265. doi: 10.1037/0022-3514.48.5.1253

Diener, E., Sandvik, E., & Larsen, R. J. (1985). Age and sex effects for emotional intensity. *Developmental Psychology, 21*(3), 542-546. doi: 10.1037/0012-1649.21.3.542

Domerchie, E. (2011). *Emotional intelligence and transformational leadership of SPHR professionals.* (Doctoral dissertation). Retrieved from Dissertations and Theses database. (UMI No. 3450073)

Donaldson-Feilder, E. J., & Bond, F. W. (2004). The relative importance of psychological acceptance and emotional intelligence to workplace well-being. *British Journal of Guidance & Counselling, 32*(2), 187-203. doi: 10.1080/08069880410001692210

Doucé, L., & Janssens, W. (2013). The presence of a pleasant ambient scent in a fashion store: The moderating role of shopping motivation and affect intensity. *Environment and Behavior, 45*(2), 215-238. doi: 10.1177/0013916511410421

Downey, L. A., Papageorgiou, V., & Stough, C. (2005). Examining the relationship between leadership, emotional intelligence and intuition in senior female managers. *Leadership & Organization Development Journal, 27*(4), 250-264. doi: 10.1108/01437730610666019

Dritschel, B. H., & Teasdale, J. D. (1991). Individual differences in affect-related cognitive operations elicited by experimental stimuli. *British Journal of Clinical Psychology, 30*(2), 151-160. doi: 10.1111/j.2044-8260.1991.tb00930.x

Dvir, T., Eden, D., Avolio, B. J., & Shamir, B. (2002). Impact of transformational leadership on follower development and performance: A field experiment. *Academy of Management Journal, 45*, 735-744. doi: 10.2307/3069307

Eichmann, K. (2009). *The effectiveness of training to improve the emotional intelligence of leaders.* (Doctoral dissertation). Retrieved from Dissertations and Theses database. (UMI No. 3350595)

Ellis, P. D. (2010). *The essential guide to effect sizes: An introduction to statistical power, meta-analysis and the interpretation of research results*. London, United Kingdom: Cambridge University Press.

Emmons, R. A., & King, L. A. (1989). Personal striving differentiation and affective reactivity. *Journal of Personality and Social Psychology, 56*(3), 478-484. doi: 10.1037/0022-3514 .56.3.478

Erez, A., Johnson, D. E., Misangyi, V. F., LePine, M. A., & Halverson, K. C. (2008). Stirring the hearts of followers: charismatic leadership as the transferal of affect. *Journal of Applied Psychology, 93*(3), 602-616. doi: 10.1037/0021-9010.93.3.602

Eysenck, H. J. (1967). *The biological basis of personality*. Springfield, IL: Thomas.

Farh, C. I. C. C., Seo, M.-G., & Tesluk, P. E. (2012). Emotional intelligence, teamwork effectiveness, and job performance: The moderating role of job context. *Journal of Applied Psychology, 97*(4), 890-900. doi: 10.1037/a0027377

Felfe, J., & Schyns, B. (2010). Followers' personality and the perception of transformational leadership: Further evidence for the similarity hypothesis. *British Journal of Management, 21*(2), 393-410. doi: 10.1111/j.1467-8551.2009.00649.x

Fellner, A. N., Matthews, G., Shockley, K. D., Warm, J. S., Zeidner, M., Karlov, L., & Roberts, R. D. (2012). Using emotional cues in a discrimination learning task: Effects of trait emotional intelligence and affective state. *Journal of Research in Personality, 46*(3), 239-247. doi: 10.1016/j.jrp.2012.01.004

Fernández-Berrocal, P., Cabello, R., Castillo, R., & Extremera, N. (2012). Gender differences in emotional intelligence: The mediating effect of age. *Behavioral Psychology / Psicología Conductual: Revista Internacional Clínica y de la Salud, 20*(1), 77-89. Retrieved from http://www.psicologiaconductual.com/

Fernandez-Berrocal, P., Extremera, N., & Ramos, N. (2004). Validity and Reliability of the Spanish Modified Version of the Trait Meta-Mood Scale. *Psychological Reports, 94*(3, Pt1), 751-755. doi: 10.2466/pr0.94.3.751-755

Fiori, M. (2009). A new look at emotional intelligence: A dual-process framework. *Personality and Social Psychology Review, 13*(1), 21-44. doi: 10.1177/1088868308326909

Fiori, M., & Antonakis, J. (2011). The ability model of emotional intelligence: Searching for valid measures. *Personality and Individual Differences, 50*(3), 329-334. doi: 10.1016/j.paid.2010.10.010

Fiori, M., & Antonakis, J. (2012). Selective attention to emotional stimuli: What IQ and openness do, and emotional intelligence does not. *Intelligence, 40*(3), 245-254. doi: 10.1016/j.intell.2012.02.004

Fiori, M., Antonietti, J.-P., Mikolajczak, M., Luminet, O., Hansenne, M., & Rossierm, J. (2014). What Is the ability emotional intelligence test (MSCEIT) good for? An evaluation using item response theory. *PLoS ONE, 9*(6), e98827. doi: 10.1371/journal.pone.0098827

Flaherty, J. (1999). *Shaping the managerial mind*. San Fransisco, CA: Jossey-Bass.

Fleishman, E. A. (1953). The measurement of leadership attitudes in industry. *Journal of Applied Psychology, 37*(3), 153-158. doi: 10.1037/h0063436

Flett, G. L., Blankstein, K. R., & Obertynski, M. (1996). Affect intensity, coping styles, mood regulation expectancies and depressive symptoms. *Personality and Individual Differences, 20*(2), 221-228. doi: 10.1016/0191-8869(95)00163-8

Flett, G. L., & Hewitt, P. L. (1995). Criterion validity and psychometric properties of the Affect Intensity Measure in a psychiatric sample. *Personality and Individual Differences, 19*(4), 585-591. doi: 10.1016/0191-8869(95)00089-o

Føllesdal, H., & Hagtvet, K. (2013). Does emotional intelligence as ability predict transformational leadership? A multilevel approach. *The Leadership Quarterly*. doi: 10.1016/j.leaqua.2013.07.004

Frazier, P. A., Tix, A. P., & Barron, K. E. (2004). Testing moderator and mediator effects in counseling psychology research. *Journal of Counseling Psychology, 51*(1), 115-134. doi: 10.1037/0022-0167.51.1.115

Freel, M. S. (2010). *An exploratory study of emotional intelligence in clinical nurses.* 70 (Doctoral dissertation). Retrieved from Dissertations and Theses database. (UMI No. 3359827)

French, J. R. P., Jr., & Raven, B. (1959). The bases of social power. In D. Cartwright (Ed.), *Studies in social power.* (pp. 150-167). Ann Arbor, MI: Institute for Social Research.

Freudenthaler, H. H., & Neubauer, A. C. (2007). Measuring emotional management abilities: Further evidence of the importance to distinguish between typical and maximum performance. *Personality and Individual Differences, 42*(8), 1561-1572. doi: 10.1016/j.paid.2006.10.031

Frijda, N. H. (1993). Moods, emotion episodes, and emotions. In M. Lewis & J. M. Haviland (Eds.), *Handbook of emotions.* (pp. 381-403). New York, NY: Guilford Press.

Fuller, J. B., Patterson, C. E. P., Hester, K., & Stringer, D. Y. (1996). A quantitative review of research on charismatic leadership. *Psychological Reports, 78*(1), 271-287. doi: 10.2466/pr0.1996.78.1.271

Gallup. (2013). State of the American workplace: Employee engagement insights for U.S. business leaders. Retrieved from http://www.gallup.com/strategicconsulting/163007 /state-american-workplace.aspx

Gannon, N., & Ranzijn, R. (2005). Does emotional intelligence predict unique variance in life satisfaction beyond IQ and personality? *Personality and Individual Differences, 38*(6), 1353-1364. doi: 10.1016/j.paid.2004.09.001

Gardner, L., & Stough, C. (2002). Examining the relationship between leadership and emotional intelligence in senior level managers. *Leadership & Organization Development Journal, 23*(2), 68-78. doi: 10.1108/01437730210419198

Gardner, W. L., Lowe, K. B., Moss, T. W., Mahoney, K. T., & Cogliser, C. C. (2010). Scholarly leadership of the study of leadership: A review of The Leadership Quarterly's second decade, 2000–2009. *The Leadership Quarterly*, *21*(6), 922-958. doi: 10.1016/j.leaqua.2010.10.003

George, J. M. (2000). Emotions and leadership: The role of emotional intelligence. *Human Relations, 53*(8), 1027-1055. doi: 10.1177/0018726700538001

Geuens, M., & de Pelsmacker, P. (2002). Validity and reliability scores on the reduced emotional intensity scale. *Educational and Psychological Measurement,, 62*(2), 299-315. doi: 10.1177/0013164402062002007

Gignac, G. E., Palmer, B. R., Manocha, R., & Stough, C. (2005). An examination of the factor structure of the schutte self-report emotional intelligence (SSREI) scale via confirmatory factor analysis. *Personality and Individual Differences, 39*(6), 1029-1042. doi: 10.1016/j.paid.2005.03.014

Gil-Olarte Márquez, P., Palomera Martín, R., & Brackett, M. A. (2006). Relating emotional intelligence to social competence and academic achievement in high school students. *Psicothema, 18*, 118-123. Retrieved from http://www.psicothema.com/

Goldsmith, H. H., Pollak, S. D., & Davidson, R. J. (2008). Developmental neuroscience perspectives on emotion regulation. *Child Development Perspectives, 2*(3), 132-140. doi: 10.1111/j.1750-8606.2008.00055.x

Goldsmith, R. E., & Walters, H. (1989). A validity study of the Affect Intensity Measure. *Journal of Social Behavior & Personality, 4*(1), 133-140.

Goleman, D. (1995). *Emotional Intelligence*. New York, NY: Bantam.

Goleman, D. (1998). *Working with emotional intelligence*. New York, NY: Bantam Books.

Goleman, D. (2004). What Makes a Leader? *Harvard Business Review, 82*(1), 82-91. Retrieved from https://hbr.org/

Gooty, J., Connelly, S., Griffith, J., & Gupta, A. (2010). Leadership, affect and emotions: A state of the science review. *The Leadership Quarterly, 21*(6), 979-1004. doi: 10.1016/j.leaqua.2010.10.005

Gorostiaga, A., Balluerka, N., Aritzeta, A., Haranburu, M., & Alonso-Arbiol, I. (2011). Measuring perceived emotional intelligence in adolescent population: Validation of the Short Trait Meta-Mood Scale (TMMS-23). *International Journal of Clinical and Health Psychology, 11*(3), 523-537. doi: 10.1016/S1697-2600(13)70014-0

Green, D. P., & Salovey, P. (1999). In what sense are positive and negative affect independent? A reply to Tellegen, Watson, and Clark. *Psychological Science, 10*(4), 304-306. doi: 10.1111/1467-9280.00158

Gross, J. J. (1998). Antecedent- and response-focused emotion regulation: Divergent consequences for experience, expression, and physiology. *Journal of Personality and Social Psychology, 74*(1), 224-237. doi: 10.1037/0022-3514.74.1.224

Groves, R. M., Cialdini, R. B., & Couper, M. P. (1992). Understanding the decision to participate in a survey. *Public Opinion Quarterly, 56*(4), 475-495. doi: 10.1086/269338

Grubb, W. L., & McDaniel, M. A. (2007). The fakability of Bar-On's emotional quotient inventory short form: Catch me if you can? . *Human Performance, 20,* 43-59. doi: 10.1207/s15327043hup2001_3

Grunwald, M. (2001). A tower of courage; on September 11, Rick Rescorla died as he lived: Like a hero., *Washington Post, Washington, D.C. pp. F, 1*.

Guillford, J. P. (1967). *The natrure of human intelligence*. New York: McGraw-Hill.

Hall, J. A., & Mast, M. S. (2008). Are women always more interpersonally sensitive than men? Impact of goals and content domain. *Personality and Social Psychology Bulletin, 34*(1), 144-155. doi: 10.1177/0146167207309192

Hardy, L., Arthur, C. A., Jones, G., Shariff, A., Munnoch, K., Isaacs, I., & Allsopp, A. J. (2010). The relationship between transformational leadership behaviors, psychological, and training outcomes in elite military recruits. *The Leadership Quarterly, 21*(1), 20-32. doi: 10.1016/j.leaqua.2009.10.002

Harms, P. D., & Credé, M. (2010). Emotional intelligence and transformational and transactional leadership: A meta-analysis. *Journal of Leadership & Organizational Studies, 17*(1), 5-17. doi: 10.1177/1548051809350894

Härtel, C. E. J., & Page, K. M. (2009). Discrete emotional crossover in the workplace: The role of affect intensity. *Journal of Managerial Psychology*, *24*(3), 237-253. doi: 10.1108/02683940910939322

Hartmann, E. (1991). *Boundaries in the mind: A new psychology of personality*. New York, NY: Basic Books.

Hater, J. J., & Bass, B. M. (1988). Superiors' evaluations and subordinates' perceptions of transformational and transactional leadership. *Journal of Applied Psychology, 73,* 695-702. doi: 10.1037/0021-9010.73.4.695

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach.* New York, NY: The Guilford Press.

Hebb, D. O. (1955). Drives and the CNS (conceptual nervous system). *Psychological Review, 62,* 243-254. Retrieved from http://psychclassics.yorku.ca/Hebb/

Hebert, E. B. (2011). *The relationship between emotional intelligence, transformational leadership, and effectiveness in school principals.* (Doctoral dissertation). Retrieved from Dissertations and Theses database. (UMI No. 3447903)

Heinitz, K., Liepmann, D., & Felfe, J. (2005). Examining the Factor Structure of the MLQ: Recommendation for a Reduced Set of Factors. *European Journal of Psychological Assessment, 21*(3), 182-190. doi: 10.1027/1015-5759.21.3.182

Henry, C., Mitropoulou, V., New, A. S., Koenigsberg, H. W., Silverman, J., & Siever, L. J. (2001). Affective instability and impulsivity in borderline personality and bipolar II disorders: Similarities and differences. *Journal of Psychiatric Research, 35*(6), 307-312. doi: 10.1016/s0022-3956(01)00038-3

Henry, C., Van den Bulke, D., Bellivier, F., Roy, I., Swendsen, J., M'Baïlara, K., . . . Leboyer, M. (2008). Affective lability and affect intensity as core dimensions of bipolar disorders during euthymic period. *Psychiatry Research, 159*(1-2), 1-6. doi: 10.1016/j.psychres.2005.11.016

Herold, D. M., Fedor, D. B., Caldwell, S., & Liu, Y. (2008). The effects of transformational and change leadership on employees' commitment to a change: A multilevel study. *Journal of Applied Psychology, 93*(2), 346-357. doi: 10.1037/0021-9010.93.2.346

Hiller, N. J., DeChurch, L. A., Murase, T., & Doty, D. (2011). Searching for outcomes of leadership: A 25-year review. *Journal of Management, 37*(4), 1137-1177. doi: 10.1177/0149206310393520

Hoaglin, D. C., & Iglewicz, B. (1987). Fine-tuning some resistant rules for outlier labeling. *Journal of the American Statistical Association, 82*(400), 1147. doi: 10.1080/01621459.1987.10478551

Hochschild, A. R. (1983/2003). *The managed heart: Commercialization of human feeling*. Berkeley, CA: University of California Press. (Original work published 1983)

Hochwarter, W. A., Zellars, K. L., Perrewé, P. L., & Harrison, A. W. (1999). The interactive role of negative affectivity and job characteristics: Are high-NA employees destined to be unhappy at work? *Journal of Applied Social Psychology, 29*(10), 2203-2218.

Hoepfner, R., & O'Sullivan, M. (1968). Social intelligence and I.Q. *Educational and Psychological Measurement, 28*, 339-344. doi: 10.1177/001316446802800211

Hoffman, B. J., Woehr, D. J., Maldagen-Youngjohn, R., & Lyons, B. D. (2011). Great man or great myth? A quantitative review of the relationship between individual differences and leader effectiveness. *Journal of Occupational and Organizational Psychology, 84*(2), 347-381. doi: 10.1348/096317909x485207

House, R. J. (1977). A 1976 theory of chasimatic leadership. In J. G. Hunt & L. L. Larson (Eds.), *Leadership: The cutting edge* (pp. 189-207). Carbondale, IL: Southern Illinois University Press.

Howell, J. M., & Avolio, B. J. (1993). Transformational leadership, transactional leadership, locus of control, and support for innovation: Key predictors of consolidated-business-unit performance. *Journal of Applied Psychology, 78*, 891-902. doi: 10.1037/0021-9010.78.6.891

Humphrey, R. H. (2012). How do leaders use emotional labor? *Journal of Organizational Behavior, 33*, 740-744. doi: 10.1002/job.1791

Hunt, J. G. (1999). Transformational/charismatic leadership's tranformation of the field: An historical essay. *The Leadership Quarterly, 10*(2), 129-144. doi: 10.1016/s1048-9843(99)00015-6

Hur, Y., van den Berg, P. T., & Wilderom, C. P. M. (2011). Transformational leadership as a mediator between emotional intelligence and team outcomes. *The Leadership Quarterly, 22*(4), 591-603. doi: 10.1016/j.leaqua.2011.05.002

Jaccard, J., & Turrisi, R. (2003). *Interaction effects in multiple regression*. Thousand Oaks, CA: Sage Publications.

Jin, S., Seo, M.-G., & Shapiro, D. L. (2008). Revisiting the link between leaders' emotional intelligence and transformational leadership: The moderating role of emotional intensity. *Academy of Management Annual Meeting Proceedings,* 1-6. doi: 10.5465/ambpp.2008 .33662502

Johnson, S. J., Batey, M., & Holdsworth, L. (2009). Personality and health: The mediating role of trait emotional intelligence and work locus of control. *Personality and Individual Differences, 47*(5), 470-475. doi: 10.1016/j.paid.2009.04.025

Johnson, S. K. (2009). Do you feel what I feel? Mood contagion and leadership outcomes. *The Leadership Quarterly, 20*(5), 814-827. doi: 10.1016/j.leaqua.2009.06.012

Johnson, V. S. (1999). *Why we feel: The science of human emotion*. New York, NY: Perseus Books.

Jones, R. E., Leen-Feldner, E. W., Olatunji, B. O., Reardon, L. E., & Hawks, E. (2009). Psychometric properties of the Affect Intensity and Reactivity Measure adapted for Youth (AIR–Y). *Psychological Assessment, 21*(2), 162-175. doi: 10.1037/a0015358

Jordan, P. J., Ashkanasy, N. M., & Hartel, C. E. J. (2002). Emotional intelligence as a moderator of emotional and behavioral reactions to job insecurity. *Academy of Management Review, 27*(3), 361-372. doi: 10.2307/4134384

Jordan, P. J., Ashkanasy, N. M., Härtel, C. E. J., & Hooper, G. S. (2002). Workgroup emotional intelligence: Scale development and relationship to team process effectiveness and goal focus. *Human Resource Management Review, 12*(2), 195-214. doi: 10.1016/s1053-4822(02)00046-3

Jose, P. E. (2013). *Doing statistical mediation and moderation analysis*. New York, NY: Guilford Press.

Joseph, D. L., & Newman, D. A. (2010). Emotional intelligence: An integrative meta-analysis and cascading model. *Journal of Applied Psychology, 95*(1), 54-78. doi: 10.1037/a0017286

Judge, T. A., & Bono, J. E. (2000). Five-factor model of personality and transformational leadership. *Journal of Applied Psychology, 85*(5), 751-765. doi: 10.1037/0021-9010 .85.5.751

Judge, T. A., Bono, J. E., Ilies, R., & Gerhardt, M. W. (2002). Personality and leadership: A qualitative and quantitative review. *Journal of Applied Psychology, 87*(4), 765-780.

Judge, T. A., & Ilies, R. (2004). Affect and job satisfaction: A study of their relationship at work and at home. *Journal of Applied Psychology, 89*(4), 661-673. doi: 10.1037/0021-9010.89 .4.661

Judge, T. A., & Larsen, R. J. (2001). Dispositional affect and job satisfaction: A review and theoretical extension. *Organizational Behavior and Human Decision Processes, 86*(1), 67-98. doi: 10.1006/obhd.2001.2973

Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology, 89*(5), 755-768. doi: 10.1037/0021-9010.89.5.755

Judge, T. A., Piccolo, R. F., & Ilies, R. (2004). The forgotten ones? The validity of consideration and initiating structure in leadership research. *Journal of Applied Psychology, 89*(1), 36-51. doi: 10.1037/0021-9010.89.1.36

Judge, T. A., Woolf, E. F., Hurst, C., & Livingston, B. (2006). Charismatic and transformational leadership: A review and an agenda for future research. *Zeitschrift für Arbeits- und Organisationspsychologie, 50*(4), 203-214. doi: 10.1026/0932-4089.50.4.203

Kanne, D. W. (2005). *Emotional intelligence and the transformational learning journey of 30 senior pastors who participated in LEAD.* (Doctoral Dissertation). Retrieved from Dissertation Abstracts International (UMI No. 3188224)

Kark, R., Shamir, B., & Chen, G. (2003). The two faces of transformational leadership: Empowerment and dependency. *Journal of Applied Psychology, 88*(2), 246-255. doi: 10.1037/0021-9010.88.2.246

Kenny, D. A. (2011). Moderation. Retrieved January 13, 2013, from http://davidakenny.net/cm /moderation.htm

Kirkland, K. L. (2011). *The effect of emotional intelligence on emotional competence and transformational leadership.* (Doctoral dissertation). Retrieved from Dissertations and Theses database. (UMI No. 3443941)

Kluemper, D. H. (2008). Trait emotional intelligence: The impact of core-self evaluations and social desirability. *Personality and Individual Differences, 44*(6), 1402-1412. doi: 10.1016/j.paid.2007.12.008

Kouzes, J. M., & Posner, B. Z. (1987). *The leadership challenge: How to get extraordinary things done in organizations*. San Francisco, CA: Jossey-Bass.

Krishnan, V. R. (2005). Transformational leadership outcomes: Role of relationship duration. *Leadership & Organization Development Journal, 26*, 442-457. doi: 10.1108/01437730510617654

Kuhnert, K. W. (1994). Transforming leadership: Developing people through delegation. In B. M. Bass & B. J. Avolio (Eds.), *Improving organizational effectiveness through transformational leadership.* (pp. 10-25). Thousand Oaks, CA: Sage Publications, Inc.

Kulshrestha, U., & Sen, C. (2006). Subjective well being in relation to emotional intelligence and locus of control among executives. *Journal of the Indian Academy of Applied Psychology, 32*(2, Spec Issue), 129-134.

Lam, C. S., & O'Higgins, E. R. E. (2012). Enhancing employee outcomes: The interrelated influences of managers' emotional intelligence and leadership style. *Leadership & Organization Development Journal, 33*(2), 149-174. doi: 10.1108/01437731211203465

Landy, F. J. (2005). Some historical and scientific issues related to research on emotional intelligence. *Journal of Organizational Behavior, 26*(4), 411-424. doi: 10.1002/job.317

Larsen, R. J. (1984). *Theory and measurement of affect intensity as an individual difference characteristic.* (Doctoral Dissertation). Retrieved from Dissertation Abstracts International (UMI No. 84-22112)

Larsen, R. J. (2009). Affect intensity. In M. R. Leary & R. H. Hoyle (Eds.), *Handbook of individual differences in social behavior.* (pp. 241-254). New York, NY: Guilford Press.

Larsen, R. J., & Augustine, A. A. (2008). Basic personality dispositions related to approach and avoidance: Extraversion/neuroticism, BAS/BIS, and positive/negative affectivity. In A. J. Elliot (Ed.), *Handbook of approach and avoidance motivation.* (pp. 151-164). New York, NY: Psychology Press.

Larsen, R. J., Billings, D. W., & Cutler, S. E. (1996). Affect intensity and individual differences in informational style. *Journal of Personality, 64*(1), 185-207. doi: 10.1111/j.1467-6494 .1996.tb00819.x

Larsen, R. J., & Diener, E. (1985). A multitrait–multimethod examination of affect structure: Hedonic level and emotional intensity. *Personality and Individual Differences, 6,* 631-636. doi: 10.1016/0191-8869(85)90013-3

Larsen, R. J., & Diener, E. (1987). Affect intensity as an individual difference characteristic: A review. *Journal of Research in Personality, 21*(1), 1-39. doi: 10.1016/0092-6566 (87)90023-7

Larsen, R. J., & Diener, E. (1992). Promises and problems with the circumplex model of emotion. In M. S. Clark (Ed.), *Emotion.* (Vol. 13, pp. 25-59). Newbury Park, CA: Sage Publications, Inc.

Larsen, R. J., Diener, E., & Cropanzano, R. S. (1987). Cognitive operations associated with individual differences in affect intensity. *Journal of Personality and Social Psychology, 53*(4), 767-774. doi: 10.1037/0022-3514.53.4.767

Larsen, R. J., Diener, E., & Emmons, R. A. (1986). Affect intensity and reactions to daily life events. *Journal of Personality and Social Psychology, 51*(4), 803-814. doi: 10.1037/0022-3514.51.4.803

Larsen, R. J., & Lerner, C. (2006). Emotional intelligence and mood regulation following the attack of September 11. In A. Delle Fave (Ed.), *Dimensions of well-being. Research and intervention* (pp. 489-511). Milano, Italy: FrancoAngeli.

Lavrakas, P. J. (Ed.). (2008). *Encyclopedia of survey research methods*. Thousand Oaks, CA: Sage Publications.

Law, K. S., Wong, C.-S., & Song, L. J. (2004). The construct and criterion validity of emotional intelligence and its potential utility for management studies. *Journal of Applied Psychology, 89*(3), 483-496. doi: 10.1037/0021-9010.89.3.483

Lazarus, R. S. (1991). *Emotion and adaptation*. New York, NY: Oxford University Press.

Leban, W., & Zulauf, C. (2004). Linking emotional intelligence abilities and transformational leadership styles. *Leadership & Organization Development Journal, 25*(7), 554-564. doi: 10.1108/01437730410561440

Lee, S. Y. (2010). Ad-induced affect: The effects of forewarning, affect intensity, and prior brand attitude. *Journal of Marketing Communications, 16*(4), 225-237. doi: 10.1080/13527260902869038

Lievens, F., Van Geit, P., & Coetsier, P. (1997). Identification of transformational leadership qualities: An examination of potential biases. *European Journal of Work and Organizational Psychology, 6*(4), 415-430. doi: 10.1080/135943297399015

Lim, B.-C., & Ployhart, R. E. (2004). Transformational leadership: Relations to the five-factor model and team performance in typical and maximum contexts. *Journal of Applied Psychology, 89*(4), 610-621. doi: 10.1037/0021-9010.89.4.610

Lindebaum, D., & Cartwright, S. (2010). A critical examination of the relationship between emotional intelligence and transformational leadership. *Journal of Management Studies, 47*(7), 1317-1342. doi: 10.1111/j.1467-6486.2010.00933.x

Lindebaum, D., & Cartwright, S. (2011). Leadership effectiveness: The costs and benefits of being emotionally intelligent. *Leadership & Organization Development Journal, 32*(3), 281-290. doi: 10.1108/01437731111123924

Ling, Y., Simsek, Z., Lubatkin, M. H., & Veiga, J. F. (2008). The impact of transformational CEOs on the performance of small- to medium-sized firms: Does organizational context matter? *Journal of Applied Psychology, 93*(4), 923-934. doi: 10.1037/0021-9010.93 .4.923

Little, R. J. A. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association, 83*, 1198-1202. doi: 10.2307 /2290157

Locke, E. A. (2005). Why emotional intelligence is an invalid concept. *Journal of Organizational Behavior, 26*(4), 425-431. doi: 10.1002/job.318

Lopes, P. N., Salovey, P., & Straus, R. (2003). Emotional intelligence, personality, and the perceived quality of social relationships. *Personality and Individual Differences, 35*(3), 641-658. doi: 10.1016/s0191-8869(02)00242-8

Lopez-Zafra, E., Garcia-Retamero, R., & Martos, M. P. B. (2012). The relationship between transformational leadership and emotional intelligence from a gendered approach. *The Psychological Record, 62*(1), 97-114. Retrieved from http://thepsychologicalrecord .siu.edu/index.html

Lowe, K. B., Kroeck, K. G., & Sivasubramaniam, N. (1996). Effectiveness correlates of transformation and transactional leadership: A meta-analytic review of the MLQ literature. *The Leadership Quarterly, 7*(3), 385-425. doi: 10.1016/s1048-9843(96)90027 -2

Lowman, R. L. (2006). *The ethical practice of psychology in organizations (2nd ed.).* Washington, DC: American Psychological Association.

Lumley, M. A., Gustavson, B. J., Partridge, R. T., & Labouvie-Vief, G. (2005). Assessing alexithymia and related emotional ability constructs using multiple methods: Interrelationships among measures. *Emotion, 5*(3), 329-342. doi: 10.1037/1528-3542 .5.3.329

Lyons, J. B., & Schneider, T. R. (2005). The influence of emotional intelligence on performance. *Personality and Individual Differences, 39*(4), 693-703. doi: 10.1016/j.paid.2005.02.018

MacCann, C., Matthews, G., Zeidner, M., & Roberts, R. D. (2003). Psychological assessment of emotional intelligence: A review of self-report and performance-based testing. *International Journal of Organizational Analysis, 11*(3), 247-274. doi: 10.1108/eb028975

Macik-Frey, M. (2007). *Communication-centered approach to leadership: The relationship of interpersonal communication competence to transformational leadership and emotional intelligence.* (Doctoral dissertation). Retrieved from Dissertations and Theses database. (UMI No. 3273961)

Mandell, B., & Pherwani, S. (2003). Relationship between emotional intelligence and transformational leadership style: A gender comparison. *Journal of Business & Psychology, 17*(3), 387-404. doi: 10.1023/A:1022816409059

Masicampo, E. J., & Lalande, D. R. (2012). A peculiar prevalence of p values just below .05. *The Quarterly Journal of Experimental Psychology, 65*(11), 2271-2279.

Matthews, G., Roberts, R. D., & Zeidner, M. (2003). Development of emotional intelligence: A skeptical--but not dismissive--perspective. *Human Development, 46*(2), 109-114. doi: 10.1159/000068585

Matthews, G., Zeidner, M., & Roberts, R. D. (2002). *Emotional intelligence: Science and myth*. Cambridge, MA: MIT Press.

Matthews, G., Zeidner, M., & Roberts, R. D. (2012). Emotional intelligence: A promise unfulfilled? *Japanese Psychological Research, 54*(2), 105-127. doi: 10.1111/j.1468-5884.2011.00502.x

Maul, A. (2012). Higher standards of validity evidence are needed in the measurement of emotional intelligence. *Emotion Review, 4*(4), 411-412. doi: 10.1177/1754073912446357

Mayer, J. D., Caruso, D. R., & Salovey, P. (2000a). Emotional intelligence meets traditional standards for an intelligence. *Intelligence, 27*(4), 267-298. doi: 10.1016/S0160-2896 (99)00016-1

Mayer, J. D., Caruso, D. R., & Salovey, P. (2000b). Selecting a measure of emotional intelligence: The case for ability scales. In R. Bar-On & J. D. A. Parker (Eds.), *The handbook of emotional intelligence: Theory, development, assessment, and application at home, school, and in the workplace.* (pp. 320-342). San Francisco, CA: Jossey-Bass.

Mayer, J. D., & Salovey, P. (1993). The intelligence of emotional intelligence. *Intelligence, 17*(4), 433-442. doi: 10.1016/0160-2896(93)90010-3

Mayer, J. D., & Salovey, P. (1995). Emotional intelligence and the construction and regulation of feelings. *Applied & Preventive Psychology, 4*(3), 197-208. doi: 10.1016/s0962-1849 (05)80058-7

Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. Sluyter (Eds.), *Emotional development and emotional intelligence: Educational implication* (pp. 3–31). New York, NY: Basic Books.

Mayer, J. D., Salovey, P., & Caruso, D. R. (2002). *MSCEIT user's manual*. Toronto, Canaada: Multi-Health Systems.

Mayer, J. D., Salovey, P., & Caruso, D. R. (2004). Emotional intelligence: Theory, findings, and implications. *Psychological Inquiry, 15*(3), 197-215. doi: 10.1207/s15327965pli1503_02

Mayer, J. D., Salovey, P., & Caruso, D. R. (2008). Emotional intelligence: New ability or eclectic traits? *American Psychologist, 63*(6), 503-517. doi: 10.1037/0003-066x.63.6.503

Mayer, J. D., Salovey, P., Caruso, D. R., & Cherkasskiy, L. (2011). Emotional intelligence. In R. J. Sternberg & S. B. Kaufman (Eds.), *The Cambridge*

handbook of intelligence. (pp. 528-549). New York, NY: Cambridge University Press.

Mayer, J. D., Salovey, P., Caruso, D. R., & Sitarenios, G. (2001). Emotional intelligence as a standard intelligence. *Emotion, 1*(3), 232-242. doi: 10.1037/1528-3542.1.3.232

Mayer, J. D., Salovey, P., Caruso, D. R., & Sitarenios, G. (2003). Measuring emotional intelligence with the MSCEIT V2.0. *Emotion, 3*(1), 97-105. doi: 10.1037/1528-3542 .3.1.97

McClelland, G. H., & Judd, C. M. (1993). Statistical difficulties of detecting interactions and moderator effects. *Psychological Bulletin, 114*(2), 376-390. doi: 10.1037/0033-2909 .114.2.376

McEnrue, M. P., & Groves, K. (2006). Choosing among tests of emotional intelligence: What is the evidence? *Human Resource Development Quarterly, 17*(1), 9-42. doi: 10.1002 /hrdq.1159

Medley, F., & Larochelle, D. R. (1995). Transformational leadership and job satisfaction. *Nursing Management, 26*(9), 64JJ-64NN. doi: 10.1097/00006247-199509000-00017

Megerian, L. E., & Sosik, J. J. (1997). An affair of the heart: Emotional intelligence and transformational leadership. *Journal of Leadership Studies, 3*(3), 20-30. doi: 10.1177/107179199700300304

Mehrotra, S., & Tripathi, R. (2012). Affect intensity and negative mood regulation (NMR) expectancies: A preliminary Indian study. *Asian Journal of Psychiatry, 5*(2), 137-143. doi: 10.1016/j.ajp.2012.04.001

Meng, X. L., Rosenthal, R., & Rubin, D. B. (1992). Comparing correlated correlation coefficients. *Psychological Bulletin, 111*, 172-175. doi: 10.1037/0033-2909.111.1.172

Meyer, R. M., O'Brien-Pallas, L., Doran, D., Streiner, D., Ferguson-Paré, M., & Duffield, C. (2011). Front-line managers as boundary spanners: Effects of span and time on nurse supervision satisfaction. *Journal of Nursing Management, 19*(5), 611-622. doi: 10.1111 /j.1365-2834.2011.01260.x

Mook, D. G. (1983). In defense of external invalidity. *American Psychologist, 38*(4), 379-387. doi: 10.1037/0003-066x.38.4.379

Mooradian, T. A. (1996). Personality and ad-evoked feelings: The case for extraversion and neuroticism. *Journal of the Academy of Marketing Science, 24*(2), 99-109. doi: 10.1177 /0092070396242001

Moore, D. J. (1995). Affect intensity and empathic emotions: An individual difference measure of advertising response. *Journal of Marketing Communication, 1*, 71-89. doi: 10.1080 /13527269500000010

Moore, D. J., & Harris, W. D. (1996). Affect intensity and the consumer's attitude toward high impact emotional advertising appeals. *Journal of Advertising, 25*(2), 37-50.

Moore, D. J., Harris, W. D., & Chen, H. C. (1995). Affect intensity: An individual difference response to advertising appeals. *Journal of Consumer Research, 22*(2), 154-164. doi: 10.1086/209442

Moore, K., Halle, T. G., Vandivere, S., & Mariner, C. L. (2002). Scaling back survey scales: How short is too short? *Sociological Methods & Research, 30*(4), 530-567. doi: 10.1177/0049124102030004003

Moors, G. (2012). The effect of response style bias on the measurement of transformational, transactional, and laissez-faire leadership. *European Journal of Work and Organizational Psychology, 21*(2), 271-298. doi: 10.1080/1359432x.2010.550680

Morgan, H. (1996). An analysis of Gardner's theory of multiple intelligence. *Roeper Review, 18*(4), 263. doi: 10.1080/02783199609553756

Moss, S., Ritossa, D., & Ngu, S. (2006). The effect of follower regulatory focus and extraversion on leadership behavior: The role of emotional intelligence. *Journal of Individual Differences, 27*(2), 93-107. doi: 10.1027/1614-0001.27.2.93

Muenjohn, N., & Armstrong, A. (2008). Evaluating the structural validity of the Multifactor Leadership Questionnaire (MLQ), capturing the leadership factors of transformational-transactional leadership. *Contemporary Management Research, 4*, 3-14. doi: 10.7903/cmr.v4i1.704

Murensky, C. L. (2000). *The relationships between emotional intelligence, personality, critical thinking ability and organizational leadership performance at upper levels of management.* (Doctoral dissertation). Retrieved from Dissertations and Theses database. (UMI No. 9962991)

Newsome, S., Day, A. L., & Catano, V. M. (2000). Assessing the predictive validity of emotional intelligence. *Personality and Individual Differences, 29*(6), 1005-1016. doi: 10.1016/s0191-8869(99)00250-0

Newton, R. R., & Rudestam, K. E. (1999). *Your statistical consultant: Answers to your data analysis questions*. Thousand Oaks, CA: Sage.

Nguyen, J. C. (2002). *An investigation of the relationship among the constructs of transformational and transactional leadership and general cognitive ability.*

(Doctoral dissertation). Retrieved from Dissertations and Theses database. (UMI no. 3057544)

Nofzinger, E. A., Schwartz, R. M., Reynolds, C. F., Thase, M. E., Jennings, J. R., Frank, E., . . . Kupfer, D. J. (1994). Affect intensity and phasic REM sleep in depressed men before and after treatment with cognitive-behavioral therapy. *Journal of Consulting and Clinical Psychology, 62*(1), 83-91. doi: 10.1037/0022-006x.62.1.83

Northouse, P. G. (2009). *Leadership: Theory and practice* (5th ed.). Thousand Oaks: Sage Publications.

Norušis, M. J. (2011). *IBM SPSS Statistics 19 Guide to Data Analysis*. Upper Saddle River, NJ: Pearson Education.

Nowicki, S., & Duke, M. P. (1994). Individual differences in the nonverbal communication of affect: The Diagnostic Analysis of Nonverbal Accuracy Scale. *Journal of Nonverbal Behavior, 18*(1), 9-35. doi: 10.1007/bf02169077

Nowicki, S., & Duke, M. P. (2001). Nonverbal receptivity: The Diagnostic Analysis of Nonverbal Accuracy (DANVA). In J. A. Hall & F. J. Bernieri (Eds.), *Interpersonal sensitivity: Theory and measurement.* (pp. 183-198). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

O'Boyle, E. H., Jr., Humphrey, R. H., Pollack, J. M., Hawver, T. H., & Story, P. A. (2011). The relation between emotional intelligence and job performance: A meta-analysis. *Journal of Organizational Behavior, 32*(5), 788-818. doi: 10.1002/job.714

O'Brien, A., Terry, D. J., & Jimmieson, N. L. (2008). Negative affectivity and responses to work stressors: An experimental study. *Anxiety, Stress & Coping: An International Journal, 21*(1), 55-83. doi: 10.1080/10615800701529504

O'Brien, R. M. (2007). A caution regarding rules of thumb for variance inflation factors. *Quality & Quantity: International Journal of Methodology, 41*(5), 673-690. doi: 10.1007/s11135 -006-9018-6

O'Connor, R. M., Jr., & Little, I. S. (2003). Revisiting the predictive validity of emotional intelligence: Self-report versus ability-based measures. *Personality and Individual Differences, 35*(8), 1893-1902. doi: 10.1016/s0191-8869(03)00038-2

Offermann, L. R., Bailey, J. R., Vasilopoulos, N. L., Seal, C., & Sass, M. (2004). The relative contribution of emotional competence and cognitive ability to individual and team performance. *Human Performance, 17*(2), 219-243. doi: 10.1207/s15327043hup1702_5

Oliver, A. (1997). Plugging into multiple intelligences. *Education Digest, 62*(6), 61. Retrieved from https://www.eddigest.com/index.php

Olsen, O. K., Eid, J., & Johnsen, B. H. (2006). Moral behavior and transformational leadership in Norwegian Naval Cadets. *Military Psychology, 18*(Suppl), S37-S56. doi: 10.1207 /s15327876mp1803s_4

Özaralli, N. (2003). Effects of transformational leadership on empowerment and team effectiveness. *Leadership & Organization Development Journal, 24*(6), 335-344. doi: 10.1108/01437730310494301

Palmer, B., Gardner, L., & Stough, C. (2003a, June). *Assessing the relationship between workplace emotional intelligence, job satisfaction and organisational*

commitment. Paper presented at the 5th Australia Industrial and Organisational Psychology Conference, Melbourne, Australia.

Palmer, B., Gardner, L., & Stough, C. (2003b, June). *The relationship between emotional intelligence, personality, and effective leadership*. Paper presented at the 5th Australia Industrial and Organisational Psychology Conference, Melbourne, Australia.

Palmer, B., Walls, M., Burgess, Z., & Stough, C. (2001). Emotional intelligence and effective leadership. *Leadership & Organization Development Journal, 22*(1), 5-10. doi: 10.1108/01437730110380174

Palmer, B. R., Gignac, G., Manocha, R., & Stough, C. (2005). A psychometric evaluation of the Mayer-Salovey-Caruso Emotional Intelligence Test Version 2.0. *Intelligence, 33*(3), 285-305. doi: 10.1016/j.intell.2004.11.003

Parker, J. D. A., Keefer, K. V., & Wood, L. M. (2011). Toward a brief multidimensional assessment of emotional intelligence: Psychometric properties of the Emotional Quotient Inventory—Short Form. *Psychological Assessment, 23*(3), 762-777. doi: 10.1037 /a0023289

Pérez, J. C., Petrides, K. V., & Furnham, A. (2005). Measuring trait emotional intelligence. In R. Schulze & R. D. Roberts (Eds.), *Emotional intelligence: An international handbook.* (pp. 181-201). Ashland, OH: Hogrefe & Huber Publishers.

Petrides, K. V., Frederickson, N., & Furnham, A. (2004). The role of trait emotional intelligence in academic performance and deviant behavior at school. *Personality and Individual Differences, 36*(2), 277-293. doi: 10.1016/s0191-8869(03)00084-9

Pillai, R., & Williams, E. A. (1998). Does leadership matter in the political arena? Voter perceptions of candidates' transformational and charismatic leadership and the 1996 U.S. presidential vote. *The Leadership Quarterly, 9*, 397-416. doi: 10.1016/S1048-9843 (98)90038-8

Pillai, R., Williams, E. A., Lowe, K. B., & Jung, D. I. (2003). Personality, transformational leadership, trust, and the 2000 U.S. presidential vote. *The Leadership Quarterly, 14*(161-192). doi: 10.1016/S1048-9843(03)00008-0

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879-903. doi: 10.1037/0021-9010 .88.5.879

Psilopanagioti, A., Anagnostopoulos, F., Mourtou, E., & Niakas, D. (2012). Emotional intelligence, emotional labor, and job satisfaction among physicians in Greece. *BMC Health Services Research, 12*, 463-463. doi: 10.1186/1472-6963-12-463

Rajah, R., Song, Z., & Arvey, R. D. (2011). Emotionality and leadership: Taking stock of the past decade of research. *The Leadership Quarterly, 22*(6), 1107-1119. doi: 10.1016 /j.leaqua.2011.09.006

Rash, J. A. (2011). *Respiratory sinus arrhythmia during episodes of relived sadness: The role of emotional intelligence and affect intensity.* (Doctoral dissertation). Retrieved from Dissertations and Theses database. (UMI No. MR75119)

Raven, B. H., & French, J. R. P., Jr. (1958). Legitimate power coercive power, and observability in social influence. *Sociometry, 21*, 83-97. doi: 10.2307/2785895

Reichard, R. J., Riggio, R. E., Guerin, D. W., Oliver, P. H., Gottfried, A. W., & Gottfried, A. E. (2011). A longitudinal analysis of relationships between adolescent

personality and intelligence with adult leader emergence and transformational leadership. *The Leadership Quarterly, 22*(3), 471-481. doi: 10.1016/j.leaqua.2011.04.005

Resick, C. J., Whitman, D. S., Weingarden, S. M., & Hiller, N. J. (2009). The bright-side and the dark-side of CEO personality: Examining core self-evaluations, narcissism, transformational leadership, and strategic influence. *Journal of Applied Psychology, 94*(6), 1365-1381. doi: 10.1037/a0016238

Rhoades, J. A., Arnold, J., & Jay, C. (2001). The role of affective traits and affective states in disputants' motivation and behavior during episodes of organizational conflict. *Journal of Organizational Behavior, 22*(3), 329-345. doi: 10.1002/job.72

Riggio, R. E., & Reichard, R. J. (2008). The emotional and social intelligences of effective leadership: An emotional and social skill approach. *Journal of Managerial Psychology, 23*(2), 169-185. doi: 10.1108/02683940810850808

Rivers, S. E., Brackett, M. A., Salovey, P., & Mayer, J. D. (2007). Measuring emotional intelligence as a set of mental abilities. In G. Matthews, M. Zeidner & R. D. Roberts (Eds.), *The science of emotional intelligence: Knowns and unknowns.* (pp. 230-257). New York, NY: Oxford University Press.

Roberts, R. D., Matthews, G., & Zeidner, M. (2010). Emotional intelligence: Muddling through theory and measurement. *Industrial and Organizational Psychology: Perspectives on Science and Practice, 3*(2), 140–144. doi: 10.1111/j.1754-9434.2010.01214.x

Roberts, R. D., Zeidner, M., & Matthews, G. (2001). Does emotional intelligence meet traditional standards for an intelligence? *Emotion, 1*(3), 196-231. doi: 10.1037/1528-3542 .1.3.196

Rode, J. C., Mooney, C. H., Arthaud-day, M. L., Near, J. P., Rubin, R. S., Baldwin, T. T., & Bommer, W. H. (2008). An examination of the structural, discriminant, nomological, and incremental predictive validity of the MSCEIT© V2.0. *Intelligence, 36*(4), 350-366. doi: 10.1016/j.intell.2007.07.002

Rossen, E., & Kranzler, J. H. (2009). Incremental validity of the Mayer-Salovey-Caruso Emotional Intelligence Test Version 2.0 (MSCEIT) after controlling for personality and intelligence. *Journal of Research in Personality, 43*(1), 60-65. doi: 10.1016/j.jrp.2008.12.002

Rossen, E., Kranzler, J. H., & Algina, J. (2008). Confirmatory factor analysis of the Mayer–Salovey–Caruso emotional intelligence test V2.0 (MSCEIT). *Personality and Individual Differences, 44*, 1258-1269. doi: 10.1016/j.paid.2007.11.020

Rothschild, A. (2008). *Lincoln, master of men: A study in character*. Charleston, SC: BiblioBazaar, LLC.

Rowold, J., & Heinitz, K. (2007). Transformational and charismatic leadership: Assessing the convergent, divergent and criterion validity of the MLQ and the CKS. *The Leadership Quarterly, 18*(2), 121-133. doi: 10.1016/j.leaqua.2007.01.003

Rubin, D. C., Hoyle, R. H., & Leary, M. R. (2012). Differential predictability of four dimensions of affect intensity. *Cognition and Emotion, 26*(1), 25-41. doi: 10.1080/02699931.2011 .561564

Rubin, R. S., Munz, D. C., & Bommer, W. H. (2005). Leading from within: The effects of emotion recognition and personality on transformational leadership behavior. *Academy of Management Journal, 48*(5), 845-858. doi: 10.5465/amj.2005.18803926

Russell, J. A. (1978). Evidence of convergent validity on the dimensions of affect. *Journal of Personality and Social Psychology, 36*(10), 1152-1168. doi: 10.1037/0022-3514.36.10 .1152

Russell, J. A., & Carroll, J. M. (1999). On the bipolarity of positive and negative affect. *Psychological Bulletin, 125*, 3-30. doi: 10.1037/0033-2909.125.1.3

Sala, F. (2002). *Emotional Competence Inventory (ECI): Technical manual*. Boston, MA: Hay/McBer Group.

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition and Personality, 9*(3), 185-211.

Salovey, P., Mayer, J. D., Goldman, S. L., Turvey, C., & Palfai, T. P. (1995). Emotional attention, clarity, and repair: Exploring emotional intelligence using the Trait Meta-Mood Scale. In J. W. Pennebaker (Ed.), *Emotion, disclosure, & health.* (pp. 125-154). Washington, DC: American Psychological Association.

Savin, N. E., & White, K. J. (1977). The Durbin-Watson test for serial correlation with extreme sample sizes or many regressors. *Econometrica, 45*(8), 1989-1996. doi: 10.2307/1914122

Schmidt, F. L. (1996). Statistical significance testing and cumulative knowledge in psychology: Implications for training of researchers. *Psychological Methods, 1*, 115–129. doi: 10.1037//1082-989X.1.2.115

Schutte, N. S., & Malouff, J. M. (2011). Emotional intelligence mediates the relationship between mindfulness and subjective well-being. *Personality and Individual Differences, 50*(7), 1116-1119. doi: 10.1016/j.paid.2011.01.037

Schutte, N. S., Malouff, J. M., & Bhullar, N. (2009). The Assessing Emotions Scale. In C. Stough, D. H. Saklofske & J. D. A. Parker (Eds.), *Assessing emotional*

intelligence: Theory, research, and applications. (pp. 119-134). New York, NY: Springer Science + Business Media.

Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences, 25*(2), 167-177. doi: 10.1016/s0191-8869(98)00001-4

Schutte, N. S., Malouff, J. M., Simunek, M., McKenley, J., & Hollander, S. (2002). Characteristic emotional intelligence and emotional well-being. *Cognition and Emotion, 16*(6), 769-785. doi: 10.1080/02699930143000482

Scott-Halsell, S., Shumate, S. R., & Blum, S. (2008). Using a model of emotional intelligence domains to indicate transformational leaders in the hospitality industry. *Journal of Human Resources in Hospitality & Tourism, 7*(1), 99-113.

Seidlitz, L., & Diener, E. (1998). Sex differences in the recall of affective experiences. *Journal of Personality and Social Psychology, 74*(1), 262-271. doi: 10.1037/0022-3514.74.1.262

Shamir, B., Zakay, E., Breinin, E., & Popper, M. (1998). Correlates of charismatic leader behavior in military units: Subordinates' attitudes, unit characteristics, and superiors' appraisals of leader performance. *Academy of Management Journal, 41*(4), 387-409. doi: 10.2307/257080

Shanley, L. A., Walker, R. E., & Foley, J. M. (1971). Social intelligence: A concept in search of data. *Psychological Reports, 29*(3), 1123-1132. doi: 10.2466/pr0.1971.29.3f.1123

Shibru, B., & Darshan, G. M. (2011). Effects of transformational leadership on subordinate job satisfaction in leather companies in Ethiopia. *International*

Journal of Business Management & Economic Research, 3(5), 284-296. Retrieved from http://www.ijbmer .com/index.php

Shoda, Y., Mischel, W., & Peake, P. K. (1990). Predicting adolescent cognitive and self-regulatory competencies from preschool delay of gratification: Identifying diagnostic conditions. *Developmental Psychology, 26*(6), 978-986. doi: 10.1037/0012-1649.26.6.978

Simonsson-Sarnecki, M., Lundh, L.-G., & Törestad, B. (2000). Factor structure and validity of the Affect Intensity Measure in a Swedish sample. *Personality and Individual Differences, 29*(2), 337-350. doi: 10.1016/s0191-8869(99)00197-x

Sivanathan, N., & Fekken, G. C. (2002). Emotional intelligence, moral reasoning and transformational leadership. *Leadership & Organization Development Journal, 23*(4), 198-204. doi: 10.1108/01437730210429061

Sosik, J. J., & Megerian, L. E. (1999). Understanding leader emotional intelligence and performance. *Group and Organization Management, 24*(3), 367-390. doi: 10.1177 /1059601199243006

SPSS. (2011). *IBM SPSS Missing Values 20*. Chicago, IL: IBM Software Group.

Srivastava, K. B. L., & Bharamanaikar, S. R. (2004). Emotional intelligence and effective leadership behaviour. *Psychological Studies*, *49*(2), 107-113. Retrieved from http://link.springer.com/journal/12646

Steinbrecher, S., & Bennett, J. B. (2003). *Heart-centered leadership: An invitation to lead from the inside out*. Memphis, TN: Black Pants Publishing.

Sternberg, R. J. (1985a). *Beyond IQ: A triarchic theory of human intelligence*. Cambridge, England: Cambridge: University Press.

Sternberg, R. J. (1985b). Human intelligence: The model is the message. *Science, 230*(4730), 1111-1118. doi: 10.1126/science.230.4730.1111

Sternberg, R. J., Conway, B. E., Ketron, J. L., & Bernstein, M. (1981). People's conceptions of intelligence. *Journal of Personality and Social Psychology, 41*(1), 37-55. doi: 10.1037 /0022-3514.41.1.37

Stogdil, R. M. (1950). Leadership, membership and organization. *Psychological Bulletin, 47*, 1-14. doi: 10.1037/h0053857

Stogdill, R. M. (1963). *Manual for the Leader Behavior Description Questionnaire Form XII*. Columbus, OH: Ohio State University, Bureau of Business Research.

Stoneback, D. T. (2011). *The relationship between manager emotional intelligence and job satisfaction: A quantitative study of call center employees.* (Doctoral dissertation). Retrieved from Dissertations and Theses database. (UMI No. 3482835)

Sy, T., Tram, S., & O'Hara, L. A. (2006). Relation of employee and manager emotional intelligence to job satisfaction and performance. *Journal of Vocational Behavior, 68*(3), 461-473. doi: 10.1016/j.jvb.2005.10.003

Szollose, B. (2010). *Liquid leadership: From Woodstock to Wikipedia--multigenerational management ideas that are changing the way we run things.* Austin, TX: Greenleaf Book Group Press.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Boston, MA: Allyn and Bacon.

Taggar, S., Hackett, R., & Saha, S. (1999). Leadership emergence in autonomous work teams: Antecedents and outcomes. *Personnel Psychology, 52*(4), 899-926. doi: 10.1111/j.1744 -6570.1999.tb00184.x

Tang, H.-W. V., Yin, M.-S., & Nelson, D. B. (2010). The relationship between emotional intelligence and leadership practices: A cross-cultural study of academic leaders in Taiwan and the USA. *Journal of Managerial Psychology, 25*(8), 899-926. doi: 10.1108/02683941011089143

Tellegen, A., Watson, D., & Clark, L. A. (1999a). Further support for a hierarchical model of affect: Reply to Green and Salovey. *Psychological Science, 10*(4), 307-309. doi: 10.1111/1467-9280.00159

Tellegen, A., Watson, D., & Clark, L. A. (1999b). On the dimensional and hierarchical structure of affect. *Psychological Science, 10*(4), 297-303. doi: 10.1111/1467-9280.00157

Thingujam, N. S. (2002). Emotional intelligence: What is the evidence? *Psychological Studies, 47*(1), 54-69. Retrieved from http://link.springer.com/journal/12646

Thorndike, E. L. (1920). Intelligence and its uses. *Harper's Magazine, 140*, 227-235.

Tikhomirov, A. A., & Spangler, W. D. (2010). Neo-charismatic leadership and the fate of mergers and acquisitions: An institutional model of CEO leadership. *Journal of Leadership & Organizational Studies, 17*(1), 44-60. doi: 10.1177/1548051809351537

Tracey, J. B., & Hinkin, T. R. (1998). Transformational leadership or effective managerial practices? *Group & Organization Management, 23*(3), 220-236. doi: 10.1177/1059601198233002

Tukey, J. W. (1977). *Exploratory data analysis*. Reading, MA: Addison-Wesley Pub. Co.

Van Rooy, D. L., & Viswesvaran, C. (2004). Emotional intelligence: A meta-analytic investigation of predictive validity and nomological net. *Journal of Vocational Behavior, 65*(1), 71-95. doi: 10.1016/s0001-8791(03)00076-9

Van Rooy, D. L., Viswesvaran, C., & Pluta, P. (2005). An evaluation of construct validity: What is this thing called emotional intelligence? *Human Performance, 18*(4), 445-462. doi: 10.1207/s15327043hup1804_9

Walden University. (2012). Institutional Review Board for Ethical Standards in Research. Retrieved December 10, 2012, from http://researchcenter.waldenu.edu/Institutional -Review-Board-for-Ethical-Standards-in-Research.htm

Wallen, N. E., & Fraenkel, J. R. (2001). *Educational research: A guide to the process* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Walter, F., Cole, M. S., & Humphrey, R. H. (2011). Emotional intelligence: Sine qua non of leadership or folderol. *The Academy of Management Perspectives, 25*(1), 45-59. doi: 10.5465/amp.2011.59198449

Wang, K. L., & Groth, M. (2014). Buffering the negative effects of employee surface acting: The moderating role of employee–customer relationship strength and personalized services. *Journal of Applied Psychology, 99*(2), 341-350. doi: 10.1037/a0034428

Wang, X., Chontawan, R., & Nantsupawat, R. (2012). Transformational leadership: Effect on the job satisfaction of registered nurses in a hospital in China. *Journal of Advanced Nursing, 68*(2), 444-450. doi: 10.1111/j.1365-2648.2011.05762.x

Wang, Y.-S., & Huang, T.-C. (2009). The relationship of transformational leadership with group cohesiveness and emotional intelligence. *Social Behavior and Personality, 37*(3), 379-392. doi: 10.2224/sbp.2009.37.3.379

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of*

Personality and Social Psychology, 54(6), 1063-1070. doi: 10.1037/0022-3514.54.6.1063

Webb, S. (2005). *Examining emotional intelligence and leadership.* (Doctoral dissertation). Retrieved from Dissertations and Theses database. (UMI No. 3197949)

Weber, M. (1946). The sociology of charismatic authority. In H. H. W. M. Gerth, C. (Ed.), *Max Weber: Essays in sociology*. New York, NY: Oxford University Press.

Wechsler, D. (1958). The Nature of Intelligence. In D. Wechsler (Ed.), *The Measurement and Appraisal of Adult Intelligence (4th ed.).* (pp. 3-23). Baltimore, MD: Williams & Wilkins Co.

Weinberger, L. A. (2002). Emotional intelligence: Its connection to HRD theory and practice. *Human Resource Development Review, 1*(2), 215-243. doi: 10.1177/15384302001002005

Weinberger, L. A. (2003). *An examination of the relationship between emotional intelligence, leadership style, and perceived leadership effectiveness.* (Doctoral dissertation). Retrieved from Dissertations and Theses database. (UMI No. 3113218)

Weinberger, L. A. (2009). Emotional intelligence, leadership style, and perceived leadership effectiveness. *Advances in Developing Human Resources, 11*(6), 747-772. doi: 10.1177/1523422309360811

Weinfurt, K. P., Bryant, F. B., & Yarnold, P. R. (1994). The factor structure of the Affect Intensity Measure: In search of a measurement model. *Journal of Research in Personality, 28*(3), 314-331. doi: 10.1006/jrpe.1994.1023

Weng, H. C., Hung, C. M., Liu, Y. T., Cheng, Y. J., Yen, C. Y., Chang, C. C., & Huang, C. K. (2011). Associations between emotional intelligence and doctor burnout, job satisfaction and patient satisfaction. *Medical Education, 45*(8), 835-842. doi: 10.1111/j.1365-2923 2011.03985.x

Wessman, A. E., & Ricks, D. F. (1966). *Mood and personality*. New York, NY: Holt, Rinehart and Winston.

West, S. G., Aiken, L. S., & Krull, J. L. (1996). Experimental personality designs: Analyzing categorical by continuous variable interactions. *Journal of Personality, 64*(1), 1-48. doi: 10.1111/j.1467-6494.1996.tb00813.x

Wilde, O. (1890/1988). *The picture of Dorian Gray: Authoritative texts, backgrounds, reviews and reactions, criticism*. New York, NY: Norton.

Williams, D. G. (1989). Neuroticism and extraversion in different factors of the affect intensity measure. *Personality and Individual Differences, 10*(10), 1095-1100. doi: 10.1016/0191 -8869(89)90261-4

Williams, E. A., Pillai, R., Lowe, K. B., Jung, D., & Herst, D. (2009). Crisis, charisma, values, and voting behavior in the 2004 presidential election. *The Leadership Quarterly, 20*(2), 70-86. doi: 10.1016/j.leaqua.2009.01.002

Williams, L. M., & Barry, J. (2003). Do sex differences in emotionality mediate sex differences in traits of psychosis-proneness? *Cognition and Emotion, 17*(5), 747-758. doi: 10.1080 /02699930302284

Winkielman, P., & Berridge, K. C. (2004). Unconscious emotion. *Current Directions in Psychological Science, 13*(3), 120-123. doi: 10.1111/j.0963-7214.2004.00288.x

Winkielman, P., Berridge, K. C., & Wilbarger, J. L. (2005). Unconscious affective reactions to masked happy versus angry faces influence consumption behavior

and judgments of value. *Personality and Social Psychology Bulletin, 31*(1), 121-135. doi: 10.1177 /0146167204271309

Wofford, J. C., & Goodwin, V. L. (1994). A cognitive interpretation of transactional and transformational leadership theories. *The Leadership Quarterly, 5*(2), 161-186. doi: 10.1016/1048-9843(94)90026-4

Wolf, T. (2010). *Examination of emotional intelligence and transformational leadership of Illinois superintendents.* (Doctoral dissertation). Retrieved from Dissertations and Theses database. (UMI No. 3404884)

Wolfe, K., & Kim, H. J. (2013). Emotional intelligence, job satisfaction, and job tenure among Hotel Managers. *Journal of Human Resources in Hospitality and Tourism, 12*(2), 175-191. doi: 10.1080/15332845.2013.752710

Wong, C.-S., & Law, K. S. (2002). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. *The Leadership Quarterly, 13*(3), 243-274. doi: 10.1016/s1048-9843(02)00099-1

Wu, W., Liu, Y., Song, L. J., & Liu, J. (2006). Effects of organizational leadership on employee commitment: The moderating role of emotional intelligence. *Journal of Psychology in Chinese Societies, 7*(2), 283-306. doi: 10.1186/1752-44

Yammarino, F. J. (1994). Indirect leadership: Transformational leadership at a distance. In B. M. Bass & B. J. Avolio (Eds.), *Improving organizational effectiveness through transformational leadership.* (pp. 26-47). Thousand Oaks, CA: Sage Publications, Inc.

Yammarino, F. J., Spangler, W. D., & Dubinsky, A. J. (1998). Transformational and contingent reward leadership: Individual, dyad, and group levels of analysis. *The Leadership Quarterly, 9*(1), 27-54. doi: 10.1016/s1048-9843(98)90041-8

Ybarra, O., Rees, L., Kross, E., & Sanchez-Burks, J. (2011). Social-emotional intelligence for creating positive organization environments In K. Cameron & G. Spreitzer (Eds.), *Handbook of Positive Organizational Scholarship* (pp. 201-214). New York, NY: Oxford University Press.

Yen, S., Zlotnick, C., & Costello, E. (2002). Affect regulation in women with borderline personality disorder traits. *Journal of Nervous and Mental Disease, 190*(10), 693-696. doi: 10.1097/00005053-200210000-00006

Yu, Q., & Yuan, D.-H. (2008). The impact of the emotional intelligence of employees and their manager on the job performance of employees. *Acta Psychologica Sinica, 40*(1), 74-83. doi: 10.3724/sp.j.1041.2008.00074

Yukl, G. A. (2006). *Leadership in organizations* (6th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Zahari, I. B., & Ali Shurbagi, A. M. (2012). The effect of organizational culture and the relationship between transformational leadership and job satisfaction in petroleum sector of Libya. *International Business Research, 5*(9), 89-97. doi: 10.5539/ibr.v5n9p89

Zampetakis, L. A., & Moustakis, V. (2011). Managers' trait emotional intelligence and group outcomes: The case of group job satisfaction. *Small Group Research, 42*(1), 77-102. doi: 10.1177/1046496410373627

Zeidner, M., Matthews, G., & Roberts, R. D. (2004). Emotional intelligence in the workplace: A critical review. *Applied Psychology: An International Review, 53*(3), 371-399. doi: 10.1111/j.1464-0597.2004.00176.x

Zeidner, M., Matthews, G., & Roberts, R. D. (2009). *Emotional Intelligence: how it affects learning, work, relationships, and our mental health*. Cambridge, MA: MIT Press.

Zeidner, M., Roberts, R. D., & Matthews, G. (2008). The science of emotional intelligence: Current consensus and controversies. *European Psychologist, 13*(1), 64-78. doi: 10.1027/1016-9040.13.1.64

Zeidner, M., Shani-Zinovich, I., Matthews, G., & Roberts, R. D. (2005). Assessing emotional intelligence in gifted and non-gifted high school students: Outcomes depend on the measure. *Intelligence, 33*(4), 369-391. doi: 10.1016/j.intell.2005.03.001

Zevon, M. A., & Tellegen, A. (1982). The structure of mood change: An idiographic/nomothetic analysis. *Journal of Personality and Social Psychology, 43*(1), 111-122. doi: 10.1037 /0022-3514.43.1.111

Zopiatis, A., & Constanti, P. (2012). Extraversion, openness and conscientiousness: The route to transformational leadership in the hotel industry. *Leadership & Organization Development Journal, 33*(1), 86-104. doi: 10.1108/01437731211193133

Appendix A: Demographic Survey Questions

Note: These questions are for data analysis purposes only. All personal information is held in strict confidence by the researcher.

1. Name: (First) _____ (middle initial) ___ (Last) _____
2. Are you male or female?
   - ☐ Male
   - ☐ Female
3. What is the highest level of education you have completed?
   - ☐ Some high school
   - ☐ High school graduate or GED
   - ☐ Trade/technical training
   - ☐ Some college, no degree
   - ☐ Associate degree
   - ☐ Bachelor's degree
   - ☐ Graduate degree
4. How many years of experience do you have in a supervisory role? ____ years
5. Do you consider yourself to be: (You may check more than one)
   - ☐ American Indian or Alaska Native
   - ☐ Asian
   - ☐ Black/African-American
   - ☐ White/Caucasian
   - ☐ Hispanic or Latino/Latina
   - ☐ Native Hawaiian or Pacific Islander
   - ☐ Other: _____
6. What is your age? ____ years old

Appendix B: Permission Documentation

Permission documentation for the MSCEIT

MHS
Multi-Health Systems Inc.

www.mhs.com

Publishers and Distributors of Professional Assessment Materials

May 8, 2012

To Whom it May Concern,

This letter is to confirm that Robert Schaefer has been granted permission by Multi-Health Systems Inc, (MHS) to use the MSCEIT ™ for his dissertation at the Walden University.

Robert has also met our Qualifications, which are in accordance with the ethical and professional standards of the American Psychological Association and the Standards for Education and Psychological Testing, to administer this instrument.

Thank you,

Khira Ray,
Multi Health Systems, Inc.

MHS
In Canada: 3770 Victoria Park Ave., Toronto, ON M2H 3M6; (800) 268-6011 or 416-492-2627
In US: P.O. Box 950, North Tonawanda, NY 14120-0950; (800) 456-3003
International +1-416-492-2627
Fax +1-416-492-3343; Toll Free in Canada and the U.S. (888)540-4484
VISIT OUR WEBSITE AT http://www.mhs.com

Permission documentation for the MLQ

www.mindgarden.com

To whom it may concern,

This letter is to grant permission for the above named person to use the following copyright material for his/her research:

Instrument: ***Multifactor Leadership Questionnaire***

Authors: ***Bruce Avolio and Bernard Bass***

Copyright: ***1995 by Bruce Avolio and Bernard Bass***

Five sample items from this instrument may be reproduced for inclusion in a proposal, thesis, or dissertation.

The entire instrument may not be included or reproduced at any time in any published material.

Sincerely,

Robert Most
Mind Garden, Inc.
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Permission documentation for the AIM

Subject: Re: Permission request to use the AIM in a dissertation study
From: "Randy Larsen" <rlarsen@wustl.edu>
Date: 4/24/2012 12:11 PM
To: "Robert Schaefer" <rscha001@waldenu.edu>

Dear Robert - Thank you for your interest in my work. Please feel free to use the AIM in your research, with attribution to the following publication:

Larsen, R. J., & Diener, E. (1987). Affect intensity as an individual difference characteristic: A review. *Journal of Research in Personality, 21*, 1-39.

Best regards,

Randy J. Larsen
Stuckenberg Professor of Human Values and Chair
Department of Psychology CB 1125
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Appendix C:Sample Items from the MSCEIT

Factor: Identifying Emotions

Indicate how much of each emotion is present in this picture.

Emotion	**Not Much**				**Very**
Happiness	1	2	3	4	5
Fear	1	2	3	4	5
Sadness	1	2	3	4	5
Surprise	1	2	3	4	5

Factor: Using Emotions

What mood(s) might be helpful to feel when meeting in-laws for the very first time?

Mood	**Not Useful**				**Useful**
Tension	1	2	3	4	5
Surprise	1	2	3	4	5
Joy	1	2	3	4	5

Note: From *"Mayer-Salovey-Caruso Emotional Intelligence Test (*MSCEIT) Item Booklet*" by J.D. Mayer, P. Salovey, and D.R. Caruso, p. 1-26. Copyright 2002 by Multi-Health Systems. Adapted with permission.*

Appendix D: Sample Items from the MLQ-5X

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always				
0	1	2	3	4				
I talk optimistically about the future.				0	1	2	3	4
I re-examine critical assumptions to question whether they are appropriate				0	1	2	3	4
I am effective in meeting others' job-related needs.				0	1	2	3	4
I heighten others' desire to succeed.				0	1	2	3	4
I seek differing perspectives when solving problems.				0	1	2	3	4

Note: *From* "Multifactor Leadership Questionnaire: Manual and Sample Set (3rd ed.)" *by B.J. Avolio, and B.M. Bass, p. INSERT PAGE. Copyright 2004 by Mind Garden. Reproduced with permission*.

Appendix E: Sample Items from the AIM

Never	Almost Never	Occasionally	Usually	Almost Always	Always
1	2	3	4	5	6
When I accomplish something difficult I feel delighted or elated.				1 2 3 4 5 6	
My emotions tend to be more intense than those of most people.				1 2 3 4 5 6	
When I'm happy it's a feeling of being untroubled and content rather than being zestful and aroused.				1 2 3 4 5 6	
The sight of someone who is hurt badly affects me greatly.				1 2 3 4 5 6	
When I feel guilty, this emotion is quite strong.				1 2 3 4 5 6	

Note: From "Affect intensity as an individual difference characteristic: A review," by R.J. Larsen and E. Diener, 1987, *Journal of Research in Personality, 21*, p. 34. Copyright 1987 by The American Psychological Association. Adapted with permission of the author.