The Role of Leader Self-Efficacy in Leadership Performance

Erin McLaughlin Louisiana State University Shreveport

ABSTRACT

With the dynamic, increasingly competitive business environment organizations presently face, the need to obtain a competitive advantage by leveraging human resources is apparent. While leadership has been extensively researched, the specific criterion for the selection of top performing leaders remains vague. Numerous studies have made the connection between leadership effectiveness and intelligence, but conflict remains regarding the make-up of a successful leader. In this study I propose that cognitive abilities and emotional intelligence competencies predict leadership performance, and that each relationship is moderated by leader self-efficacy. Implications for research and practice are discussed, as well as directions for future research.

Keywords: emotional intelligence, leadership, self-efficacy, cognitive ability

INTRODUCTION

Leadership has become a hot topic in management and organizational literature in recent years. Over the course of such research, an individual's cognitive abilities have been identified as strong predictors of leader performance; and more recently, emotional intelligence (EI) has been found to play a role in leadership effectiveness. While emotions have been a heavily researched topic in areas such as sociology and psychology, the construct has recently moved into human resource management literature as a result of an increased emphasis in studying how emotions relate to performance and how that impacts performance appraisals, training, and selection.

Recent research has started to distinguish the relationships between emotional and cognitive intelligence (e.g., Kemper, 1999; Murensky, 2000; Salopek, 1998), but the moderators potentially impacting the prediction of leadership performance have not been addressed. This study investigates the role of leader self-efficacy as a moderator in the relationship between cognitive ability and leader performance; and as a moderator in the relationship between emotional intelligence and leader performance.

The remainder of this article is organized as follows. First, evidence will be presented indicating that cognitive abilities predict leadership performance. A literature review of emotional intelligence will follow, along with support for EI as a predictor of leadership performance. Third, identifying potential moderator variables may account for inconsistencies in the relationships; thus, leader self-efficacy will be addressed. Finally, I will conclude the proposal with the contributions and recommendations for future research.

Cognitive Ability

In the last decade there has been a resurgence of interest in the psychology of individual differences (Lubinski, 2000). This renewed interest embraces general intelligence, cognitive abilities, specific aptitudes, personality traits, interests, values, and other traits that explain differences between individuals and groups (Schmidt & Hunter, 2004). Developments and findings that have contributed to the rekindled interest include the evidence that cognitive ability is highly correlated with an array of life outcomes, ranging from risky health-related behaviors, to criminal offenses, to the ability to use a bus or subway system (Gottfredson, 1997; Lubinski & Humphreys, 1997; Schmidt & Hunter, 2004). Additionally, research has demonstrated that cognitive ability predicts occupational level and performance; both outcomes were predicted stronger than with any other trait (Schmidt & Hunter, 2004).

It is no secret that companies look to maximize predicted job performance when seeking new hires; this has led industrial/organizational psychologists to recommend hiring applicants on the basis of cognitive ability (Hunter & Hunter, 1984; Schmidt & Hunter, 2004). According to Schmidt and Hunter (1998), recruiting candidates with high cognitive ability should result in higher performance across a wide range of jobs; and may be explicitly sought after in the recruitment process. Cognitive tests and personality tests comprise the most common forms of employment tests. Specifically, cognitive tests are individualized assessment measures of general intelligence or the general mental ability of individuals. Cognitive tests specifically include general intelligence; and aptitude tests. General intelligence tests are intended to measure overall level of intelligence; and aptitude tests measure an individual's ability to perform on particular tasks. Aptitude tests assess an applicant's abilities with regard to cognitive, verbal, and numeric skills (Heneman & Heneman, 1994).

Cognitive Ability and Leadership Performance

Many researchers have found general cognitive ability to be the best predictor of performance and conclude that other specific ability variables provide insignificant increments in predictive validity (McHenry, Hough, Toquam, Hanson, & Ashworth, 1990; Ree, Earles, & Teachout, 1994; Schmidt, 1988). Other researchers have firmly disagreed with such conclusions (e.g., Baehr & Orban, 1989; Bentz, 1988; McClelland, 1993; Sternberg & Wagner, 1993). Nonetheless, in the managerial or leadership realm, studies of cognitive ability as a predictor of leadership performance have found positive relationships between leader effectiveness and intellect (Bass, 1990). More specifically, research has found that general intelligence is more important in leader positions (Rusmore, 1984). The meta-analysis conducted by Lord, Devader, and Alliger's (1986) also supported the positive relationship between general intelligence and leader effectiveness across a variety of situations. After reviewing the literature, it is apparent across studies that a higher level of intellect is possessed by leaders than by other group members, yet the results show inconsistencies in just how strong a predictor cognitive abilities are of leadership performance.

As can be seen in the review of previous literature, leader intelligence is thought to be related to leadership performance, but the construct has not been studied in depth since the resurgence of interest in individual differences. Thus, as cognitive ability has been associated with leadership performance, the need to reassess this relationship and the impact of other mediating and moderating variables is eminent.

But leaders possess more than just cognitive ability; they possess the ability to get things done (Schmidt, Hunter, & Outerbridge, 1986). Emotional maturity, tenacity, and conscientiousness constitute some of these other abilities that have been found to have a relationship with success in leadership roles (Murensky, 2000).

Emotional Intelligence

The concept of emotional intelligence (EI) has gained the attention of researchers and practitioners alike (e.g., Shapiro, 1997; Weisenger, 1998; Abraham, 1999). Employees are no longer perceived as biological machines able to leave their feelings, norms, and attitudes at home when they go to work. Thus, organizations have identified the need to send their employees to various EI training courses offered by management consultants (Wong & Law, 2002). Management researchers are also embracing the concept of EI due to its applicability to workplace issues such as performance, job satisfaction, absenteeism, organizational commitment, and leadership issues (Rozell, Pettijohn, & Parker, 2002).

The roots of EI stem from the concept of "social intelligence" which was first acknowledged by Thorndike in 1920. Thorndike defined social intelligence as "the ability to understand and manage men/women, boys/girls—to act wisely in human relations" (p. 231). Gardner (1993) followed up on Thorndike's work and identified seven intelligence domains in his development of the Multiple Intelligence Theory. In Gardner's work on multiple intelligences, he recognized interpersonal and intrapersonal intelligences as two imperative aspects of the social intelligence outlined by Thorndike (1920). Specifically, intrapersonal intelligence was "one's intelligence in dealing with oneself, and thus the ability to symbolize complex and highly differentiated sets of feelings" (p. 239); while interpersonal intelligence was "one's intelligence in dealing with others and the ability to notice and make distinctions among other individuals and, in particular, among their moods, temperaments, motivations, and intentions" (p. 239).

Although "emotional intelligence" was not specifically published until 1990, general literature had at least referenced the concept as early as the 1980's. The research was actually a doctoral dissertation in which Wayne Payne never published his theory regarding this notion of emotional intelligence (Salovey & Mayer, 1990). However, by the late 1980's, psychologists, evolutionary biologists, psychiatrists, computer scientists, and others had identified a number of human capacities involved in identifying and understanding emotions. A means to organize these many research contributions was imperative, so Mayer and Salovey (1990) proposed that the abilities together made up a unitary emotional intelligence. They suggested that EI could be divided into three broad areas, and further into sub-areas; later Mayer and Salovey (1997) added a fourth and final branch to their model. For this study, I will use Mayer and Salovey's (1997) four-dimension model of EI, which contains the following:

- Identifying emotions. Identifying or perceiving emotions is the initial and most basic of the four branches. It is the nonverbal reception and expression of emotion, and includes several skills such as the ability to identify feelings, express emotions accurately, and to differentiate between real and phony emotional expressions (Mayer, Salovey, & Caruso, 2002). Furthermore, emotions tend to appear in facial expressions, tone of voice, body language, and even works of art (Salovey & Mayer, 1990). Emotions researchers, evolutionary biologists, specialists in nonverbal behavior, and others have made tremendous strides in understanding how human beings recognize and express emotions. They have pointed out that emotional expressions evolved in animal species as a form of critical social communication; and that facial expressions such as happiness, sadness, anger, and fear are universally recognizable in humans (Mayer & Salovey, 1997).
- 2. *Facilitating emotions*. Mayer and Salovey (1990) identified the second area as using emotions to facilitate thought. This is the capacity of emotions to enter into and guide the cognitive system and promote thinking. The emotional facilitation of thought includes the ability to use emotions to redirect attention to important events and to generate emotions that facilitate decision making (Salovey and Mayer, 1990).
- 3. Understanding emotions. This dimension is an assessment of an individual's ability to understand emotions and to reason with emotional knowledge (Kerr, Garvin, Heaton & Boyle, 2006). An individual who understands the complexities of emotions can better handle challenging situations, and the ability to comprehend the cause of emotions gives insight into human nature, particularly regarding relationships (Salovey & Mayer, 1990). Understanding emotions is the ability to comprehend complex emotions, the ability to recognize the causes of emotions, and the ability to understand relationships among emotions (Mayer, Salovey, & Caruso, 2000). Therefore, fully understanding emotions involves the comprehension of the meaning of emotions, coupled with the capacity to reason about those meanings, and it is central to the group of emotionally intelligent skills (Mayer & Salovey, 1997).

4. Using emotions. The highest branch of the EI model (Mayer & Salovey, 1990) involves managing both your own feelings and the emotions of others. Managing emotions includes the ability to remain aware of one's emotions, even those that are unpleasant, the ability to determine whether an emotion is clear or typical, and the ability to solve emotion-laden problems without necessarily suppressing negative emotions (Mayer, et al., 2000). Because the using emotions branch is viewed as the most advanced EI ability within the model, it has the potential for the greatest impact on performance functions (George, 2000); furthermore, the ability to regulate emotions can assist in the creation of effective strategies to achieve enhanced performance.

Thus, psychology professors John D. Mayer and Peter Salovey are the true founders of emotional intelligence. In their first academic paper (Mayer & Salovey, 1990), the formal definition of emotional intelligence emerged as, "the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual thought" (p. 187). In their theory of EI, Mayer and Salovey implied that two distinct mental processes, thinking and feeling, actually work together to focus on the extent to which people's cognitive capabilities are informed by emotions and the extent to which emotions are cognitively managed.

Shortly after Mayer and Salovey's (1990) work on EI, journalist Daniel Goleman came across their "emotional intelligence" concept as he was preparing a book on emotional literacy in education. Goleman was captivated by the underlying notions of EI and in 1995 he published the *New York Times* bestseller "Emotional Intelligence: Why It Can Matter More Than IQ." Captivated by the topic, Goleman published "Working with Emotional Intelligence" in 1998 and "Primal Leadership: Learning to Lead with Emotional Intelligence," with colleagues Boyztis and McKee in 2002.

While there has been substantial discussion about the interaction of cognitive and noncognitive neural systems in the human brain, as well as theory on how that affects emotions (e.g., Fischer, Shaver, & Carnochan, 1990; Izard, 1992, 1993), specific theory on EI and its affect on job performance is quite limited. As defined by Gross, emotions are "adaptive behavioral and physiological response tendencies that are called forth directly by evolutionarily significant situations" (Gross, 1998, p. 272). Because emotions are response tendencies, it is possible for them to be controlled and managed. Thus, emotion regulation refers to "the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions" (Gross, 1998, p. 275). Individuals who have a high level of emotional intelligence understand how their emotions affect them, those around them, and organizational performance; by managing emotional expressions and reactions in the work setting, such individuals are able to create positive, constructive work environments (Ashforth & Humphreys, 1995).

Matching the emotion regulation definitions, as provided by Gross, to Mayer and Salovey's (1990) definition of EI reveals a theoretical foundation for the continually developing stream of research on EI. Before emotions can be controlled, people must identify and accurately express their emotions (Identifying emotions). Furthermore, Gross' emotion regulation model stipulates that an individual can modify how they use their experiences and emotions to perhaps promote thinking and guide cognitive thought (Facilitating emotions). While Mayer and Salovey (1997) identify the need to recognize the causes of emotions and the ability to understand relationships among emotions (Understanding emotions), Gross' emotion regulation model emphasizes an understanding of the reason for the experiencing of the particular emotions. Since our own emotions are often stimulated by others' emotions, the ability to manage both your own feelings and the emotions of others (Managing emotions) is also imperative in Gross' model. Thus, the defining of EI and emotion regulation lead to the notion that people with higher emotional intelligence should be more capable of controlling their response tendencies; therefore, such individuals will be more effective in their emotion regulation process. When Gross' model of emotion regulation is applied to the work context, it is evident that emotionally intelligent employees will be more capable of controlling their perception of the environment in which they work (Wong & Law, 2002).

Emotional Intelligence and Leadership Performance

The connection between EI and leadership is intuitive; when leaders are able to identify, facilitate, understand, and manage their own emotions, as well as the emotions of others, organizations can achieve success in our highly competitive business environment. Thus, emotional intelligence has become an increasingly popular measure for identifying potentially effective leaders and as a tool for developing effective leadership skills. George (2000) argues that emotionally intelligent leaders can promote organizational effectiveness at all levels. Furthermore, that the EI of leaders plays an important role in the quality and effectiveness of social interactions with other individuals. Salovey, Bedell, Betweiler, and Mayer (1999) found that individuals who rated highly in the ability to accurately perceive, understand, and appraise others' emotions were better able to respond flexibly to changes in their social environments and build supportive networks. Mayer, et al. (2000) proposed that a high level of EI might enable a leader to be better able to monitor how work group members are feeling and take the appropriate action. It is suggested that emotionally intelligent individuals can perceive, understand, and regulate the emotions of others, thus making emotional intelligence a significant factor in the success of interpersonal interaction in a work context (Dulewicz, Higgs, & Slaski, 2003). An emotionally intelligent leader can utilize emotional information when making difficult decisions in order to facilitate positive, creative outcomes (Ashkanasy & Daus, 2001). Furthermore, communication of an enthusiastic vision by the emotionally intelligent leader can create positive constructive relationships with their followers (Ashkanasy & Tse, 2000). One such instance is employees who may be performing adequately in their current role, but moving them to a position that takes advantage of both technical competencies and emotional abilities could increase their job performance and satisfaction (Salovey & Mayer, 1990). Mayer, Goleman, Barrett, and Gutstein (2004) found that understanding of your own emotions, as well as understanding others' emotions, were found to play an important part in organizational life. Well agreed upon in the literature is the argument that emotional intelligence is a catalyst of leadership (Ashkanasy & Daus, 2001) and positively related to job performance (O'Boyle, Humphrey, Pollack, Hawver & Story, 2011). According to George (2000), EI assists leaders in the articulation of team goals and objectives, it encourages enthusiasm among members, and it instills flexibility; EI also promotes cooperation, trust, and identity within work teams. Thus, an emotional intelligence competency can be measured reliably and distinguishes effective performers from ineffective performers at levels of statistical significance (Cherniss & Goleman, 2001). As can be seen from the previous literature review, EI is believed to differentiate superior performers from average performers, and that the higher the level of emotional intelligence competency the greater the contribution to leadership effectiveness.

Self-efficacy and Leader Self-efficacy

The theory of self-efficacy can be drawn from the work of Bandura (1977, 1997), and represents the belief in one's ability to execute an intended act and the belief that one is personally capable of implementing or engaging in an intended behavior. An individuals' self-efficacy belief represents a motivational factor that has a reinforcing capability or it affects other processes like preferences, deployment of skills, emotions, or cognitive processes (Bandura, 1997; Gist & Mitchell, 1992). Over time self-efficacy has been identified as a moderating variable in several relationships that ultimately predict performance (e.g., Lam, Chen, & Schaubroeck, 2002; Schaubroeck, Lam, & Xie, 2000). Additionally, self-efficacy pertains to beliefs regarding one's capabilities for the successful implementation of specific goals or tasks which can be varied and extend to multiple areas within a specific task domain (Bandura, 1986; 1997; Gist, 1987). In the context of the present study, the focus is on leadership self-efficacy (LSE), which are the perceived capabilities of the individual regarding the performance of functions necessary to effectively accomplish specific leadership roles or tasks (Chemers, Watson & May, 2000; Kane, Zaccaro, Tremble & Masuda, 2002). Stated differently, LSE is a specific form of efficacy beliefs targeted at leadership behaviors.

Leader Self-Efficacy and Leadership Performance

Only a handful of studies have examined the relationship between leader self-efficacy and leader effectiveness (e.g., Chemers, Watson, & May, 2000; Kane, Zaccaro, Tremble, & Masuda, 2002; Ng, Ang, & Chan, 2008; Paglis & Green, 2002). Building on the theoretical framework of self-efficacy (Bandura, 1977, 1997), it is reasonably expected that leaders with greater LSE will perform better as leaders. Support for this notion has been shown by Ng, Ang, and Chan (2008) who identified that individuals with high LSE expend more effort in the fulfillment of their leadership roles and are inclined to persevere longer in the face of difficulty. Specifically, Chemers et al. (2000), in a study of military cadets, found that individuals reporting higher LSE were given more positive leadership ratings—as judged by their instructors, peers, and trained observers over the course of a six-week training camp. In a group context, Kane et al. (2002) conducted a laboratory experiment and found that leaders with higher LSE had set more significant goals and created clearer task strategies, both of which led to increased performance from the group. Similar to the previous two findings, Paglis and Green (2002) identified that managers' attempts to lead change were more supported by their subordinates when the leader had greater confidence in setting directions and gaining commitments from the individuals involved.

In summary, while there has been research suggesting the role of managers' selfperceived capabilities playing a role in the leadership process, this construct has not been explored in great depth, or looked at in a moderating role. A moderating variable has the ability to explain inconsistencies in relationships; thus, accounting for leader self-efficacy may help explain some of the variance in these relationships. Addressing leader self-efficacy will also assist in the understanding of the motivational function of perceived abilities as it pertains to leader behavior. Because self-efficacy is a core self-evaluation process, it is instinctive that it would impact the relationships between the competencies and leadership performance. For this study, leader self-efficacy is addressed in a moderating role because there is no argument that it exists, and evaluating the impact it has on these relationships may help assess what ultimately predicts greater leadership performance.

DISCUSSION

There is no dispute that the success of an organization depends on its employees. This study advocates selection for leadership positions on the basis of a variety of abilities, namely cognitive and emotional. Furthermore, assessment of leader self-efficacy, or self-confidence in leadership abilities, plays an imperative role in their leadership effectiveness.

Hiring leaders with a greater level of cognitive ability and emotional intelligence, and training these employees to use their competencies, adds substantial value to the organization as a whole (Blank, 2008). As clearly depicted by Goleman (1998), EI describes noncognitive abilities that are distinct from, but at the same time complementary to, cognitive intelligence. The goal of this article was to reacquaint researchers and organizations with information that examines abilities with practical application for a variety of functions within human resources; and to encourage future research to assess moderating variables, like leader self-efficacy, when evaluating the predictors of leadership performance.

Contribution

As scholars continue to turn to cognitive abilities and emotional intelligence as core variables affecting leader performance (e.g., Bass, 1990; Lord, et al., 1986; Rozell, et al., 2002; Wong & Law, 2002), the relevance and timeliness of this study are evident. This model provides support for research on cognitive abilities and emotional intelligence competencies being predictors of leadership performance. Additionally, it depicts the need to address the moderating variables of these relationships; this study specifically looked at leader self-efficacy as a moderator. If individuals' possess higher levels of leader self-efficacy, then intelligence levels— both cognitive and emotional—are more likely to predict leadership performance. Stated differently, it does not matter how much cognitive ability or emotional intelligence an individual has, if they have no confidence in their leadership skills—as assessed by leader self-efficacy—then these abilities are not strong predictors of leadership performance. Therefore, organizations need to bolster leader self-efficacy so individual's cognitive and emotional abilities matter. In an organizational setting, role models may be a way to boost leader self-efficacy and additional studies should investigate their influence.

From a research standpoint, the contributions of this study are abundant. First, this study has the potential to refresh research on the role of cognitive abilities in investigations of individual differences. Second, this study contributes to the emotional intelligence literature stream. Because EI has such strong roots and ties to social intelligence, theoretically differentiating the two constructs continues to challenge researchers; nonetheless, the emotional intelligence perspective continues to be another tool that scholars can use in their efforts to identify, understand, and predict behavior. Therefore, this study will add and contribute to the understanding of EI and assist in the building of a nomological network to support this stream of research. Furthermore, as research on EI continues to drive scholarly interest, the need to address additional constructs is apparent. As previously mentioned, another contribution of this study is addressing leader self-efficacy as a potential moderating variable because it has the ability to explain inconsistencies in relationships; thus, accounting for leader self-efficacy in

various work-related studies may help explain some of the variance in the relationships. Finally, the replication of research results that purport a positive relationship between EI and leader performance, as well as cognitive abilities and leadership performance, are also warranted and addressed in this study.

Several practical applications for the study of these relationships merit further discussion as well. First, cognitive ability and emotional intelligence are positively related to performance (e.g., Ashkanasy & Daus, 2001; George, 2000; Mayer, et al., 2004; McHenry, et al., 1990; Ree, et al., 1994; Schmidt, 1988), so these findings would support the use of these tools for recruitment, selection, training, and performance appraisals. Second, the ability to recognize the amount of self-efficacy necessary for a leadership role will allow for better manager selection and employee-job-fit. Finally, from a review of the self-efficacy literature, the link with selfconfidence and the influence of role models is evident. Individuals learn of their possibilities, of how things can be done, of where resources can be obtained, and of factors leading to success or failure from their role models (Scherer, Brodzinski & Wiebe, 1990). Role models are often used as a source of information and support (Bandura, 1986) and constitute contextual factors that influence leader self-efficacy. Thus, using role models in an organizational setting may help increase leader self-efficacy.

Summary

In closing, the purpose of this study was threefold: 1) to examine the relationship between cognitive abilities and leadership performance; 2) to assess the relationship between emotional intelligence and leadership performance; and 3) to investigate leader self-efficacy as a moderator of each of the aforementioned relationships. Therefore, it is proposed that when individuals possess high leader self-efficacy, their cognitive and emotional abilities will better predict their leadership performance. Future research should empirically test these relationships in a variety of work contexts, and should look for additional mediating and moderating variables that might have an impact.

REFERNCES

- Abraham, R. (1999). Emotional intelligence in organizations: A conceptualization. *Genetic, Social, and General Psychology Monographs, 125*(2), 209-224.
- Ashforth, B. E. & Humphrey, R. H. (1995). Emotion in the workplace: A reappraisal. *Human Relations*, 48, 97-125.
- Ashkanasy, N. M., & Daus, C. (2001). Emotion in the Workplace: The New Challenge for Managers. *Academy of Management Executive*, *16*(1), 76-86.
- Ashkanasy, N. M., & Tse, B. (2000). Transformational leadership as management of emotion: A conceptual review. In N. M. Ashkanasy, C. E. J. Hartel, & W. Zerbe, (Eds.) *Emotions in the Workplace: Research, Theory, and Practice*. Westport, CT: Quorum Books.
- Baehr, M. E., & Orban, J. A. (1989). The role of intellectual abilities and personality characteristics in determining success in higher-level positions. *Journal of Vocational Behavior*, 35, 270-287.
- Bandura, A. (1977). Social Learning Theory. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1986). Social Foundations of Thought and Action: A Social Cognitive Theory. Prentice Hall: Englewood Cliffs, NJ.
- Bandura, A. (1997). Self-efficacy: The Exercise of Control. New York: Freeman.
- Bass, B. M. (1990). Bass and Stogdill's Handbook of Leadership. New York: The Free Press.
- Bentz, V. J. (1988). Commentary: Comments on papers concerning fairness in employment testing. *Journal of Vocational Behavior*, *33*, 388-397.
- Blank, I. (2008). Selecting employees based on emotional intelligence competencies: Reap the rewards and minimize the risk. *Employee Relations Law Journal*, *34*(3), 77-85.
- Chemers, M. M., Watson, C. B., & May, S. T. (2000). Dispositional affect and leader effectiveness: A comparison of self-esteem, optimism, and efficacy. *Personality and Social Psychology*, 26, 267-277.
- Cherniss, C., & Goleman, D. (2001). *The Emotionally Intelligent Workplace*. New York: Bantam Books.
- Dulewicz, V., Higgs, M., & Slaski, M. (2003). Measuring emotional intelligence: Content, construct, and criterion-related validity. *Journal of Managerial Psychology*, 18(5), 405-420.
- Fischer, K. W., Shaver, P. R., & Carnochan, P. (1990). How emotions develop and how they organize development. *Cognitions and Emotion*, *4*, 81-127.
- Gardner, H. (1993). Multiple Intelligences: The Theory in Practice. New York: Basic Books.
- George, J. M. (2000). Emotions and leadership: The role of emotional intelligence, *Human Relations*, 53, 1027-1055.
- Gist, M. E. (1987). Self-efficacy: Implications for organizational behavior and human resource management. *Academy of Management Review*, *12*, 472-485.
- Gist, M. E., & Mitchell, T. R. (1992). Self-efficacy: A theoretical analysis of its determinants and malleability. *Academy of Management Review*, 17, 183-211.
- Goleman, D. (1995). *Emotional intelligence: Why it can matter more than IQ*. New York: Bantam Books.
- Goleman, D. (1998). Working with Emotional Intelligence. New York: Bantam Books.
- Goleman D., Boyztis, R., & McKee, A. (2002). *Primal Leadership: Learning to Lead with Emotional Intelligence*. Massachusetts: Harvard Business School Press.

- Gottfredson, L. S. (1997). Why g matters: The complexity of everyday life. *Intelligence*, 24, 79-132.
- 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.
- Hunter, J. E., & Hunter, R. F. (1984). Validity and utility of alternate predictors of job performance. *Psychological Bulletin, 96,* 72-98.
- Hunter, J. E., & Hunter, F. L. (1996). Intelligence and job performance: Economic and social implications. *Psychology, Public Policy, and Law,* 2, 447-472.
- Hunter, J. E., & Schmidt, F. L. (1990). *Methods of Meta-Analysis: Correction error and bias in research findings*. Libertyville, IL: Wonderlic.
- Izard, C. E. (1992). Basic emotions, relations among emotions, and emotion-cognition relations. *Psychological Review*, *99*, 561-565.
- Izard, C. E. (1993). Four systems for emotion activation: Cognitive and noncognitive processes. *Psychological Review*, *100*, 68-90.
- Kane, T. D., Zaccaro, S. J., Tremble, T. T., & Masuda, A. D. (2002). An examination of the leader's regulation of groups. *Small Group Research*, *33*, 65-120.
- Kemper, C. L. (1990). EQ vs. IQ. Communication World, 16(9), 15-19.
- Kerr, R., Garvin, J., Heaton, N., & Boyle, E. (2006). Emotional intelligence and leadership effectiveness, *Leadership & Organization Development Journal*, 27(4), 265-279.
- Lam, S. K., Chen, X., & Schaubroeck, J. (2002). Participative decision making and employee performance in different cultures: The moderating effects of allocentrism/idiocentrism and efficacy. Academy of Management Journal, 45(5), 905-914.
- Lord, R. G., DeVader, C. L., & Alliger, G. M. (1986). A test of leadership categorization theory: Internal structure, information processing, and leadership perceptions. *Organizational Behavior and Human Performance*, 34, 82-200.
- Lubinski, D. (2000). Scientific and social significance of assessing individual differences: Sinking shafts at a few critical points. *Annual Review of Psychology*, *51*, 405-444.
- Lubinski, D., & Humphreys, L. G. (1997). Incorporating general intelligence into epidemiology and social sciences. *Intelligence*, 24, 159-201.
- Mayer, J. D., Goleman, D., Barrett, C., Gutstein, S. (2004). Leading by feel, *Harvard Business Review*, 82(1), 27.
- Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey, & D. Sluyter (Eds.), *Emotional Development and Emotional Intelligence: Educational Implications*. New York: Basic Books, 3-34.
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2000). Models of emotional intelligence. In R. J. Sternberg (Ed.), *Handbook of Intelligence*. Cambridge, England: Cambridge University Press, 396-420.
- McClelland, D. C. (1993). Intelligence is not the best predictor of job performance. *Current Directions in Psychological Science*, 2, 5-6.
- McHenry, J. J., Hough, L. M., Toquam, J. L., Hanson, M. A., & Ashworth, S. (1990). Project A validity results: The relationship between predictor and criterion domains. *Personnel Psychology*, 43, 335-354.
- Murensky, C. L. (2000). The relationship between emotional intelligence, personality, critical thinking ability and organizational leadership performance at upper levels of management. Dissertation at George Mason University, Fairfax, VA.

- Newman, D. A., & Lyon, J. S. (2009). Recruitment efforts to reduce adverse impact: Targeted recruiting for personality, cognitive ability, and diversity. *Journal of Applied Psychology*, 94(2), 298-317.
- Ng, K., Ang, S., & Chan, K. (2008). Personality and Leader Effectiveness: A moderated mediation model of leadership self-efficacy, job demands, and job autonomy. *Journal of Applied Psychology*, *93*(4), 733-743.
- O'Boyle, E. H., 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, 788-818.
- Paglis, L. L., & Green, S. G. (2002). Leadership self-efficacy and managers' motivation for leading change. *Journal of Organizational Behavior*, 23, 215-235.
- Ree, J. R., Earles, J. A., & Teachout, M. S. (1994). Predicting job performance: Not much more than g. *Journal of Applied Psychology*, *79*, 518-524.
- Roth, P. L., Bevier, C. A., Bobko, P., Switzer, F. S., & Tyler, P. (2001). Ethnic group differences in cognitive ability in employment and educational settings: A meta-analysis. *Personnel Psychology*, 54, 297-330.
- Rozell, E. J., Pettijohn, E., & Parker, R. S. (2002). An empirical evaluation of emotional intelligences: The impact of management development. *Journal of Management Development*, 21(4), 272-289.
- Rusmore, J. T., & Baker, H. (1987). Executive performance in four organizational levels and two kinds of intellectual ability. In Bass, B. (1990). *Bass and Stogdill's Handbook of Leadership*. New York: The Free Press.
- Salopek, J. J. (1998). Train Your Brain. Training & Development, 52(10), 26-33.
- Salovey, P., Bedell, B., Betweiler, J. B., & Mayer, J. D. (1999). Coping intelligently: Emotional intelligence and the competing process. In Snyder, C. R. (Eds.), *Coping: The Psychology of What Works*. New York: Oxford University Press, 141-164.
- Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, 9(3), 185-211.
- Schaubroeck, J., Lam, S. K., & Xie, J. L. (2000). Collective versus individual self-efficacy in coping responses to stressors and control: A cross-cultural study. *Journal of Applied Psychology*, 85, 512-525.
- Scherer, R. F., Brodzinski, J. D., & Wiebe, F. A. (1990). Entrepreneur career selection and gender: A socialization approach. *Journal of Small Business Management*, 28(2), 37-44.
- Schmidt, F. L. (1988). The problem of group differences in ability test scores in employment selection. *Journal of Vocational Behavior*, *33*, 272-292.
- Schmidt, F. L., & Hunter, J. E. (1998). The validity and utility of selection methods in personnel psychology: Practical and theoretical implications of 85 years of research findings. *Psychological Bulletin*, 124, 262-274.
- Schmidt, F. L., & Hunter, J. (2004). General mental ability in the world of work: Occupational attainment and job performance. *Journal of Personality and Social Psychology*, 86(1), 162-173.
- Schmidt, F. L., Hunter, J. E., & Outerbridge, A. N. (1986). The impact of job experience and ability on job knowledge, work sample performance and supervisory ratings of job performance. *Journal of Applied Psychology*, 71, 432-439.
- Shapiro, L. E. (1997). *How to Raise a Child with a High EQ: A parent's guide to emotional intelligence.* New York: HarperCollins.

- Spearman, C. (1904). General intelligence, objectively determined and measured. *American Journal of Psychology*, 15, 201-293.
- Sternberg, R. J., & Wagner, R. K. (1993). The g-ocentric view of intelligence and job performance is wrong. *Current Directions in Psychological Science*, *2*, 1-5.
- Suliman, A. M., & Al-Shaikh, F. N. (2007). Emotional intelligence at work: links to conflict and innovation. *Employee Relations*, 29(2), 208-220.
- Thorndike, E. L. (1920). Intelligence and its uses. Harper's Magazine, 140, 227-235.
- Weisinger, H. (1998). *Emotional Intelligence at Work: The untapped edge for success*. San Francisco: Jossey-Bass.
- Wong, C. & Law, K. (2002). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. *The Leadership Quarterly*, *13*, 243-274.