



Emotional intelligence of leaders: a profile of top executives

Emotional
intelligence of
leaders

Steven J. Stein and Peter Papadogiannis

Multi-Health Systems, Toronto, Canada

Jeremy A. Yip

University of Toronto, Toronto, Canada, and

Gill Sitarenios

Multi-Health Systems, Toronto, Canada

87

Received March 2008

Revised June 2008

Accepted July 2008

Abstract

Purpose – The purpose of this paper is to examine the emotional intelligence (EI) scores of two high profile executive groups in comparison with the general population. Also the study aims to investigate the executive group's EI scores in relation to various organizational outcomes such as net profit, growth management, and employee management and retention.

Design/methodology/approach – The Emotional Quotient Inventory (EQ-i) was administered to a sample of 186 executives (159 males and 27 females) belonging to one of two executive mentoring associations, the Young Presidents' Organization (YPO) and the Innovators' Alliance (IA). A series of questions relating to pre-tax operating profits over the past three years, previous year's net profit, and various business challenges were asked of each executive.

Findings – The results showed that top executives differed significantly from the normative population on the EQ-i in eight of the 15 EQ-i subscales. Executives who possessed higher levels of empathy, self-regard, reality testing, and problem solving were more likely to yield high profit-earning companies, while Total EQ-i was related to the degree to which a challenge was perceived as being easy with respect to managing growth, managing others, and training and retaining employees.

Practical implications – The findings enable researchers and practitioners to better understand what leadership differences and similarities exist at various organizational levels. These profiles further aid in human resource initiatives such as leadership development and personnel selection.

Originality/value – Despite empirical evidence supporting the relationship between EI and leadership, research with high-level leadership samples is relatively sparse. The study examines EI in relation to two unique, yet high functioning executive groups, which will enable further exploration into the emotional and psychological structure of these high-performing groups.

Keywords Emotional intelligence, Senior management, Leadership, Performance management

Paper type Research paper

The construct of emotional intelligence (EI) has garnered recent interest for its potential utility in leadership development as evidenced by the recent increase in the volume of empirical investigations assessing individual differences among those in leadership positions (e.g. Atwater *et al.*, 1999; LePine *et al.*, 1997). With the maturation of the EI construct in the psychology literature, scholars have sought to link emotion competencies to leadership behavior and organizational performance (George, 2000; Huy, 1999; Law *et al.*, 2004; Rubin *et al.*, 2005). Despite the proposed relationship between EI and leadership and the recent increase in research, empirical evidence



Leadership & Organization

Development Journal

Vol. 30 No. 1, 2009

pp. 87-101

© Emerald Group Publishing Limited

0143-7739

DOI 10.1108/01437730910927115

supporting such conjectures is still relatively sparse (Zeidner *et al.*, 2004). The present study advances our current understanding of the influence of emotional intelligence on leadership performance by examining EI in relation to two high profile executive groups: the Young Presidents' Organization (YPO) and the Innovators' Alliance (IA).

Emotional intelligence at work

Since its inception in the early 1990s, the construct of emotional intelligence has received considerable attention in applied and academic text and has been identified as an important part of an individual's ability to successfully contribute to an organization's success (Bar-On, 1997; Bar-On and Parker, 2000; Goleman, 1998; Stein and Book, 2003). Although I/O psychologists have been studying aspects of EI in organizations for decades, the concept is still relatively new and there is still much that needs to be researched in order to gain clarity into the impact that EI may have on individual and organizational performance. While there are several conceptual definitions of emotional intelligence (Bar-On, 1997; Goleman, 1995, 1998; Mayer *et al.*, 2000; Salovey and Mayer, 1989), they all share several theoretical underpinnings, which include: an awareness of one's own emotions, an awareness of emotions in others, an understanding of emotions, and the ability to manage one's own emotions and the emotions of others.

Although there is a general agreement of EI as a nonacademic intelligence with predictive value beyond general intelligence or "g" (Fox and Spector, 2000; Gardner, 1983), there is a growing debate as to how EI should be operationalized. The two prominent models of emotional intelligence include an ability-based model and a skill based model, which differ in their conceptual approach to the application of EI. The ability model defines EI according to intelligence theory, emphasizing the cognitive elements of EI and uses a performance-based assessment method known as the MSCEIT (Mayer *et al.*, 2002) to discriminate various levels of EI. Specifically, Mayer and Salovey (1990) defined emotional intelligence as the ability to monitor one's own and other's feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and actions. The skills based model is trait-based and encompasses a broader set of competencies. In this framework, Bar-On (2005) defines emotional intelligence as a cross section of interrelated emotional and social competencies, skills and facilitators that determine how effectively we understand and express ourselves, understand others and relate with them, and cope with daily demands. A measurement tool that underpins the skills based model is the Emotional Quotient Inventory (EQ-i; Bar-On, 1997). In either case, each model and its respective inventory has been examined empirically and accepted as a valid measure of emotional intelligence (Bar-On, 2004; Mayer *et al.*, 2004; Van Rooy *et al.*, 2005).

For the purpose of the present study, the EQ-i was identified as the instrument of choice for two reasons. First, past research has shown links between the EQ-i and leadership (Barling *et al.*, 2000; Butler and Chinowsky, 2006; Stuart and Paquet, 2001). Second, the EQ-i was selected due to its application in organizational settings. The EQ-i has been shown to be positively related to teamwork behavior (Sue-Chan and Latham, 2004), and job performance (Bachman *et al.*, 2000), and negatively related to anxiety (Summerfeldt *et al.*, 2006) and depression (Dawda and Hart, 2000).

Emotional intelligence and leadership

Because of a constantly changing business environment, leadership positions often require more than just task competencies or technical know-how (George, 2000). Riggio *et al.* (2002) propose that effective leaders possess multiple forms of intelligence, which allows them to respond successfully to various situations. In particular, scholars have noted that emotional skills are essential for executive level leader performance (Carmeli, 2003) and become increasingly important (compared to IQ and technical skills) as individuals advance within their organizational hierarchies (Dulewicz and Higgs, 2003; Goleman *et al.*, 2002). Goleman (1998, p. 93) states that “effective leaders are alike in one crucial way: they all have a high degree of emotional intelligence” and suggests that emotional intelligence is the sine qua non of leadership.

In their research with leaders of a large biotechnology/agricultural company, Rubin *et al.* (2005) found that the ability to recognize emotion, maintain positive affect, and demonstrate agreeableness, positively predicted transformational leadership behavior. Using emotion recognition, a facet of EI, Rubin *et al.* (2005) concluded that leaders who were able to perceive emotions more accurately were rated more highly on transformational leadership behavior, suggesting that these types of leaders were more interpersonally sensitive than leaders who rely on contingent reward behavior. In their research with construction executives, Butler and Chinowsky (2006) found a positive relationship between total EQ and transformational leadership and that 34 percent of the variance in transformational leadership was explained by total EQ. The authors also identify five specific components of EI that were related to transformational leadership behaviors. As such, we suggest the following hypothesis:

- H1.* The executive group will have significantly higher scores on emotional intelligence than the general population.

Transformational leadership is largely viewed as the most effective form of leadership, a style in which leaders are closely engaged with followers beyond conventional transactional exchanges and is predictive of positive individual and organizational outcomes (Bass, 1997). In order for leaders to engage in transformational behaviors they must be confident in their ability to manage their own emotions and the emotions of others. Bar-On (1997) proposes that individuals with higher levels of emotional intelligence have the ability to handle stressful situations without losing control and are able to maintain a calm composure when relating with others even while experiencing intense emotions. Sosik and Megerian (1999) suggest that emotionally intelligent people feel more secure in their ability to control and influence life events and, as a result, provide individual focus on others as well as intellectually stimulate and motivate followers. Accordingly, we hypothesize that:

- H2.* Higher scores on emotional intelligence will be positively related to the degree to which managing others was perceived as less challenging.

Organizational outcomes

This study also examines EI in relation to organizational outcomes. Huy (1999) posited that emotional intelligence could help facilitate adaptation in periods of discontinuous change or paradigm shifts. Under these conditions, a leader must address the emotionality of the challenge before focusing on the rationality of it in order to inspire individual and collective action. During changing conditions, communication is often

laden with emotional content (George, 2000) and skillful persuasion using emotional appeals is the key to overcoming resistance to change (Fox and Amichai-Hamburger, 2001). We can therefore expect that there will be an association between EI and the perception of business challenges facing the organization, since the executive's perception will serve as the basis for the generation and communication of any sort of change program. Accordingly, the hypothesis would be stated as:

- H3.* Higher scores on emotional intelligence will be positively related to the degree to which a business challenge was perceived as less challenging.

Given the pervasive influence of the executive over the organization, it is expected that the EI of the executive group will be directly related to organizational performance in regards to profitability. McClelland (1999) reported that division presidents with higher levels of emotional intelligence outperformed performance targets by 15 to 20 percent and had a 94 percent retention, while those who scored lower on emotional intelligence competencies under-performed by 20 percent and had only a 50 percent retention. Pesuric and Byham (1996) found that supervisors who received emotional intelligence training exceeded performance targets by \$250,000, while research conducted at a national insurance company revealed that sales people who were rated very strong in five of eight key emotional intelligence competencies doubled the sales of others (Goleman, 1998). This leads us to the following hypothesis:

- H4.* Executives who possess higher levels of emotional intelligence will yield higher profit.

Method

Participants and procedures

A sample of 186 executives (159 males and 27 females) belonging to one of two executive mentoring associations, the Young Presidents' Organization (YPO) and the Innovators' Alliance (IA) voluntarily participated in the present study. Participants ranged in age from 27 to 59 years ($M = 41.37$, $SD = 7.11$). To gain membership into these associations, an individual must hold the title of CEO, Owner, President, or Managing Director of his or her company, and that organization must generate a minimum of \$2 million annually. The minimum number of full-time employees was 10; however, many of those included in the sample had 50 employees or greater. The type of industry in which each firm operated varied substantially, ranging from information technology to professional services to manufacturing.

Members of the two leadership organizations were enlisted to complete the EQ-i as part of a series of presentations given by the first author. All participants were guaranteed anonymity in their responses through the use of alphanumeric codes. However, post data collection, these codes permitted the pairing of the participant with their respective assessment for individualized feedback. The Innovators' Alliance group was also asked to respond to a questionnaire examining their perceptions of business challenges. The same group was also evaluated on organizational performance, which was measured by an organization's profitability. All participants were aware that their results would be analyzed at the group level for research purposes.

Measures

Emotional intelligence. Emotional intelligence was measured using the Emotional Quotient Inventory (EQ-i; Bar-On, 1997). The EQ-i is a self-report measure and is generally described as a skills-based model of EI. The Bar-On (1997) model involves an array of personal, emotional, and social abilities and skills. The EQ-i is comprised of 125 relatively short items, in which responses are provided on a five-point Likert scale ranging from “Very Often True of Me or True of Me” to “Very Seldom True of Me or Not True of Me”. The EQ-i raw scores are converted into standard scores based on a mean of 100 and a standard deviation of 15 (Bar-On, 1997). The total EQ score breaks down into 15 content scale scores, which are clustered into five composite scores. The composite scores are Intrapersonal, Interpersonal, Stress Management, Adaptability, and General Mood. The subscales are Emotional Self-Awareness, Assertiveness, Self-Regard, Self-Actualization, Independence, Empathy, Interpersonal Relationship, Social Responsibility, Stress Tolerance, Impulse Control, Problem Solving, Flexibility, Reality Testing, Optimism, and Happiness (see Table I). A higher score on any individual composite or subscale (or the total EQ-i score) implies stronger EI skills and a more positive prediction for effective functioning in meeting demands and challenges. Conversely, a lower EQ-i score suggests poorer EI skills and a reduced ability to be effective in meeting demands and challenges (Bar-On, 1997).

The reliability of the EQ-i has been examined by a number of researchers (Matthews *et al.*, 2002; Newsome *et al.*, 2000; Petrides and Furnham, 2000), with the consensus of findings revealing that the instrument is reliable, consistent, and stable. Bar-On (1997) reported that the internal consistency reliability of the overall EQ-i was 0.76 and the test–retest reliability of 0.85 after one month and 0.75 after four months.

EQ-i scales	EI skills assessed by each EQ-i scale
Intrapersonal	<i>Self-awareness and self expression:</i>
Self-regard	To accurately perceive, understand and accept oneself
Emotional self-awareness	To be aware of and understand one’s emotions
Assertiveness	To effectively and constructively express one’s emotions and oneself
Independence	To be self-reliant and free of emotional dependency on others
Self-actualization	To strive to achieve personal goals and actualize one’s potential
Interpersonal	<i>Social awareness and Interpersonal relationship:</i>
Empathy	To be aware of and understand how others feel
Social responsibility	To identify with one’s social group and cooperate with others
Interpersonal relationship	To establish mutually satisfying relationships and relate well with others
Stress management	<i>Emotional management and regulation:</i>
Stress tolerance	To effectively and constructively manage emotions
Impulse control	To effectively and constructively control emotions
Adaptability	<i>Change management:</i>
Reality-testing	To objectively validate one’s feelings and thinking with external reality
Flexibility	To adapt and adjust one’s feelings and thinking to new situations
Problem-solving	To effectively solve problems of a personal and interpersonal nature
General mood	<i>Self-motivation:</i>
Optimism	To be positive and look at the brighter side of life
Happiness	To feel content with oneself and life in general

Table I.
Emotional Quotient
Inventory (EQ-i) scales
and measurement
characteristics

Several research studies have been conducted using the EQ-i to determine its construct validity and have shown a meaningful pattern of convergent validity with measures of psychological wellbeing and alexithymia (Dawda and Hart, 2000), as well as with other measures of emotional and social intelligence (Bar-On, 2004). The EQ-i has also shown adequate discriminant validity with measures of cognitive ability (Bar-On, 2004; Van Rooy *et al.*, 2005) and personality (Van Rooy and Viswesvaran, 2004).

In regards to criterion validity, Slaski and Cartwright (2002) found that the EQ-i was significantly correlated with morale (0.55), stress (0.41), general health (0.50), and supervisor ratings of performance (0.22) in their study of retail managers. In another study of UK managers, Slaski and Cartwright (2003) found that training in emotional intelligence resulted in increased EQ-i scores and improved health and wellbeing.

Perception of business challenges. The Perception of Business Challenges Survey was designed for the present study. It gathers information, based on a CEO's vantage point on current indicators of the company's performance and challenges being faced. The first section deals with performance indicators such as the company revenues and profits. The second section looks at the history of the CEO's involvement in the company. Relevant to the present study is the third section of the survey where the CEO rates, on a five-point scale, the amount of difficulty he or she is currently experiencing in nine areas. These include hiring the right people, managing people, keeping good people, training people, raising capital, managing growth, marketing, constantly innovating, and dealing with changes in technology. This third section is comprised of nine total items and the scale ranges from 1 (very difficult) to 5 (very easy).

Profitability. There are a number of ways to evaluate management effectiveness and successful leadership. The present study assumed that executives with sound business practices would be generating revenue streams that result in a healthy bottom line. Members of the IA were asked a series of questions relating their business practices to the pre-tax operating profits for the past three years, the previous year's profit, and the average yearly pre-tax profits for their industry as a whole.

To operationalize profitability for the purpose of this study, the sample was split into a "high profit group" and a "non-high profit group". In order to be in the high profit group, an executive had to meet both of the following conditions:

- They either had to show an average pre-tax operating profit over the past three years that was greater than 10 percent or have gross revenues in excess of \$25 million. This criterion allowed executives of the larger companies that might have difficulty sustaining 10 percent profit over three years to pass to the next criteria.
- They either had to have an average pre-tax operating profit of more than 20 percent over the past three years or a pretax profit that was at least 5 percent higher than their industry three-year average. Due to the diversity of industries, this rewarded those who out-performed their industry competitors and those who were able to build a significant revenue base in emerging industries with marginal pre-tax profits.

Only 15 executives met both the first and second criteria, while 30 executives met neither of the two criteria. In order to determine the factors that most differentiate performance of the two groups, demographic factors (age, gender, and years of experience) and EQ-i composite and subscale scores were entered into a discriminant analysis.

Results and discussion

Table II presents the means, standard deviations, and *t*-values for each of the composite scales and subscales of the EQ-i for the executive group and the general population. The general population's average score is 100 with a standard deviation of 15.

Hypothesis 1 – executive comparison with general population means

As hypothesized, the sample of executives obtained significantly higher total EQ-i scores than the general population ($t(184) = 3.32, p < 0.01$). The results also showed that executives demonstrated higher Intrapersonal ($t(192) = 7.35, p < 0.001$) and General Mood ($t(184) = 3.04, p < 0.01$) composite scale scores. Furthermore, the Adaptability composite scale was higher among the executives ($t(192) = 2.92, p < 0.01$), suggesting that a critical ability for leaders is to understand and respond to internal and external events.

At the subscale level, the executive group displayed greater Self-Regard ($t(192) = 4.2, p < 0.001$), Self-Actualization ($t(192) = 4.9, p < 0.001$), Assertiveness

	Executive mean (SD)		<i>t</i> -value	df	sig.
Total EI	103.2	(13.0)	3.32	184	<0.001
<i>Composite scales</i>					
Intrapersonal	106.6	(12.5)	7.35	192	<0.001
Interpersonal	98.6	(15.1)	-1.26	192	n.s.
Adaptability	102.9	(13.6)	2.92	192	<0.01
Stress management	100.2	(15.5)	0.15	192	n.s.
General mood	103.3	(12.6)	3.04	184	<0.01
<i>Intrapersonal subscales</i>					
Self-regard	104.1	(13.5)	4.19	192	<0.001
Emotional self-awareness	101.9	(14.8)	1.83	192	n.s.
Assertiveness	108.8	(11.7)	10.47	192	<0.001
Independence	111.2	(9.8)	15.90	192	<0.001
Self-actualization	104.6	(13.1)	4.86	192	<0.001
<i>Interpersonal subscales</i>					
Empathy	98.0	(14.8)	-1.86	192	n.s.
Social responsibility	98.1	(13.4)	-1.97	192	<0.001
Interpersonal relationship	99.2	(15.6)	-0.68	192	n.s.
<i>Adaptability subscales</i>					
Reality testing	101.2	(14.5)	1.13	192	n.s.
Flexibility	103.2	(14.3)	3.14	192	<0.01
Problem solving	104.7	(13.3)	4.97	192	<0.001
<i>Stress management subscales</i>					
Stress tolerance	108.1	(13.8)	8.10	192	<0.001
Impulse control	94.5	(16.3)	-4.72	192	<0.001
<i>General mood subscales</i>					
Optimism	106.2	(12.6)	6.64	184	<0.001
Happiness	100.4	(16.2)	0.37	192	n.s.

Table II.
T-tests of emotional
intelligence scores
between top executives
and normative sample

($t(192) = 10.5, p < 0.001$) and Independence ($t(192) = 15.9, p < 0.001$). Each of these subscales reflects skills that facilitate intrapersonal effectiveness. The capacity to posit assumptions, theories, and beliefs with confidence, as well as remaining self-directed likely enhances the level of influence for those holding leadership positions. Another notable finding relating to the EQ-i subscales is that top executives obtained higher scores in terms of Problem Solving ($t(192) = 5.0, p < 0.001$) and Flexibility ($t(192) = 3.1, p < 0.01$). Both of these subscales constitute the Adaptability composite, suggesting that executives are able to survive in their corporate environment through the continual adjustment of emotions and thoughts, and the latent ability to diagnose problems and tailor solutions. Optimism ($t(184) = 6.6, p < 0.001$) and Stress Tolerance ($t(192) = 8.1, p < 0.001$) was yet another point of differentiation when comparing executives to the general population. This lends support to the findings of Fox and Amichai-Hamburger (2001), which suggests that in order to empower an organization, a leader must maintain a positive and calm attitude when facing adversity, as well as when setting a corporate vision.

Significant lower scores were also found when comparing the executive group with the general population. The executive group scored significantly lower than the general population on the subscales of Social Responsibility ($t(192) = -1.97, p < 0.001$) and Impulse Control ($t(192) = -4.72, p < 0.001$). A lower than average score from the executive sample on the Social Responsibility scale is not entirely surprising when examining all of the different responsibilities that an executive needs to perform. On many occasions an executive will be faced with difficult decisions (e.g. layoffs, restructuring, mergers) that are relevant for the organization's continued prosperity; however, the same decision may be detrimental to smaller groups or individuals. In order to make these tough decisions, an executive may at times have to lower his or her social consciousness. The executives' lower than average Impulse Control score may be attributed to the items that make up the Impulse Control subscale. Some of the Impulse Control subscale items tap into the construct of impatience, as well as impulsivity. The constantly changing demands of the marketplace coupled with executives' desire for organizational success may impact the executives' level of patience, which influences the overall Impulse Control score.

Hypothesis 2 and 3 – EI and business challenges

The relationship between EI and perceptions of business challenges were explored and represented in Table III. Total EI was positively related to the degree to which a challenge was perceived as easy with respect to managing growth ($r = 0.28, p < 0.05$), managing others ($r = 0.38, p < 0.05$), training employees ($r = 0.39, p < 0.05$), and retaining employees ($r = 0.30, p < 0.05$). Not surprisingly, EI showed significant relationships with those challenges that center on interpersonal activities as opposed to more task-oriented challenges such as raising capital and coping with technological change. The results support the theoretical and empirical components of the Interpersonal composite scale. Given that the relationship between the emotional and social perceptions of business challenges is derived from social interactions, it is only natural that the strongest and most significant relationships exist between this global construct of EI and social challenges.

An interesting pattern of correlations were found between the composite scales of Intrapersonal and General Mood and the business challenges of managing others,

	HE	MO	RE	TE	RC	MG	M	I	CT
Total EI		0.38 ***	0.30 **	0.39 ***		0.28 *			
Composite scales									
Intrapersonal		0.29 **	0.23 *	0.38 ***		0.26 *			
Interpersonal				0.32 *					
Adaptability		0.31 **		0.25 *		0.29 *		0.23 *	
Stress management		0.37 ***	0.24 *						
General mood		0.38 ***	0.35 **	0.42 ***					
Subscales									
Self-regard		0.25 *	0.32 **	0.30 **					
Emotional self-aware									
Assertiveness				0.28 *					
Independence									
Self-actualization		0.38 ***	0.31 **	0.40 ***					
Empathy									
Social responsibility									
Interpersonal relation			0.29 *	0.34 **					
Reality testing		0.29 *		0.29 *					
Flexibility	0.32 **	0.24 *	0.23 *	0.24 *		0.26 *		0.24 *	
Problem solving						0.27 *			
Stress tolerance		0.26 *	0.24 *					0.24 *	
Impulse control		0.38 ***							
Optimism		0.28 *		0.28 *		0.23 *			
Happiness		0.37 ***	0.37 **	0.44 ***					

Notes: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; Only significant correlations are shown; HE = Hiring employees, MO = Managing others, RE = Retaining employees, TE = Training employees, RC = Raising capital, MG = Managing growth, M = Marketing, I = Innovation, CT = Coping with technological change

Table III. Correlations between emotional intelligence and perceived ease of business challenges

training employees, and retaining employees. These findings suggest that top executives are aware of key emotional information (their own and the people they lead) and use this information in their interactions with others, as well as when delivering their message to the organization. By doing so, executives are able to increase staff motivation and dedication. Adaptability was also positively related to managing growth ($r = 0.29, p < 0.05$), coping with technological change ($r = 0.23, p < 0.05$), managing people ($r = 0.31, p < 0.05$), and training employees ($r = 0.25, p < 0.05$). How leaders manage change, consequently, may have to do with their capacity to adjust emotionally as opposed to simply relying on analytic frameworks.

At the subscale level, findings showed that Flexibility had the highest positive association with perceived business challenges, thereby underscoring the role that emotional change can have when coping with organizational change. Optimism, the capability to maintain a positive attitude even under trying conditions, was positively related with perceived ease of managing growth ($r = 0.31, p < 0.05$), managing others ($r = 0.31, p < 0.05$), and training employees ($r = 0.31, p < 0.05$). Executives may therefore benefit from viewing their subordinates in a more encouraging way in order to tap into an unrealized skill set. Lastly, both Self-Regard and Self-Actualization, which comprise the Intrapersonal composite scale, were positively related to managing others, training employees, and retaining employees, thereby indicating that intrinsic

motivation and self-assuredness can likely mitigate interpersonal challenges that arise within the workplace.

Hypothesis 4 – EI and profitability

To determine which facets of EI contribute to organizational profitability, a forward step-wise discriminant function analysis that controlled for age and sex was used. For this type of analysis, the participants were divided into two categories: the high profit group and the non-high profit group. The discriminant function analysis, as presented in Table IV, revealed that four facets of EI differentiated those who belonged to highly profitable organizations from those who were associated with less profitable ventures.

The EQ-i subscale of Empathy was shown to differentiate between high and low profitability ($\Lambda = 0.63, p < 0.05$). This finding supports the assertion put forward by Ashkanasy and Tse (2000) that effective leaders regularly display empathic behavior to demonstrate their understanding of how others feel, which fortifies working relationships and unifies teams. Another distinguishing factor for profitability was Self-Regard ($\Lambda = 0.63, p < 0.05$), which is defined as the ability to respect and accept oneself as basically good with general feelings of security, inner strength, and self-assuredness. De Cremer and van Knippenberg (2004) suggested that leader self-confidence affects perceptions of leadership effectiveness, therefore, executives who project a strong sense of identity will more likely be able to motivate their workforce to perform at higher levels, ultimately resulting in greater profits. Reality Testing ($\Lambda = 0.69, p < 0.05$) and Problem Solving ($\Lambda = 0.58, p < 0.05$), both underlying the Adaptability composite scale, were also related to profitability. Hence, leaders who can realistically and accurately construe external events and who are effective problem solvers tend to be capable of realizing higher profits. In terms of classification accuracy to discriminate the executives in the top profitability group from the other executives, a high classification accuracy rate was obtained (see Table V), with 87 percent of the sample being classified correctly. This means that the

Table IV.
Forward step-wise discriminant analysis of emotional intelligence and organizational profitability

	Wilks' Lambda	Sig.
Empathy	0.63	< 0.01
Self-regard	0.56	< 0.05
Reality testing	0.69	< 0.001
Problem solving	0.58	< 0.05
Sex	0.69	< 0.001
Note: Overall Wilks' $\Lambda = 0.48, F(6,29) = 5.2, p < 0.001$		

Table V.
Classification Matrix of top executives belonging to highly profitable versus less profitable organizations

Actual group	Total #	Predicted group	% correct
Less profitable executives	30	27	90
Highly profitable executives	15	12	80
Note: 86.7 percent (39 of 45) predicted correctly overall			

classification model used is capable of predicting the profitability grouping 87 percent of the time.

Age and gender differences

In the executive sample there were no significant sex differences found for any of the global EQ-i scores, however, our findings did reveal that females reported significantly higher levels of EI than males in the Emotional Self-Awareness ($t(72) = 2.09, p < 0.05$) and Social Responsibility subscales ($t(72) = 2.37, p < 0.05$). Consistent with past EQ-i research, women have been shown to obtain higher scores on both Social Responsibility and Self-Awareness subscales (Bar-On, 2002) suggesting they possess greater social sensitivity. No significant age differences were found for between the YPO and IA groups.

Practical significance

The results of the study do support the use of the EQ-i as a functional tool in the assessment and development of individuals who are in an executive role or are about to enter an executive position. Findings showed that executives tend to have a different EI composition from the rest of the population and use a variety of EI skills in order to meet the challenges that they may face. It is extremely important for individuals to know exactly what traits are needed at different times in order to be successful in their executive role. It is evident that as an individual climbs the corporate ladder, job demands shift, as do the jobholder's necessary skills and behaviours. Leslie and Van Velsor (1996) suggested that career derailment often occurs because there is a failure to fit the individual with the constantly evolving demands of the job.

The importance of the study's findings is most evident within the social and task elements of the executive job role. It was found that different emotional intelligence skills were related to certain social challenges, while other EI skills were related to task-oriented challenges. The ability of the executive to shift from social to task demands is extremely important to job success. It would be an incredible advantage to have a good understanding of which skills are most suitable to certain situations. For example, the results suggest that it would be more beneficial to use the EI skills of Optimism, Self-Regard, and Impulse Control when managing others and the skills of Problem Solving and Flexibility when managing the organization's growth.

Limitations

There are some limitations that need to be considered when examining the results of the present study. One limitation is its reliance on self-report measures. Self-report measures allow for the possibility of self-report biases, which may have inflated EI and business challenge scores, as well as profit reporting accuracy. Also, given that sex differences were found, a larger sample of female executives would have been useful in further understanding the impact of gender on emotional intelligence and leadership performance. Unfortunately, high-level executive positions tend to be dominated by males, and this inequity is reflected in the current sample.

Another limitation is the correlational research method that was used when analyzing the data. Correlations allow for a greater understanding of relationships between variables; however, causal inferences between EI and leadership cannot be made by correlational data alone and results must be viewed with caution. However, it can be

argued that leadership is best studied in a natural setting, and that artificial experimental control will inhibit the ecological validity of research on leadership. The final limitation of the study is the restricted scope of variables measured. There are several competencies not related to emotional intelligence that are extremely important to leadership success that were not measured. Variables such as motivation, technical skills, experience, and extent of one's network can all lead to increased levels of success in leadership in various situations and these competencies were not accounted for in this study.

Future directions for research

Future research could seek to link the various components of EI to leader performance, as measured through multi-rater feedback tools. This will enable researchers to examine the relationship between the two constructs through multiple lenses, which will reduce the potential for participant and researcher bias. The current study focused solely on two groups of executives. More detailed investigations are warranted on other leader groups within the organizational hierarchy. This will enable researchers and practitioners to better understand what leadership differences and similarities exist at various organizational levels. These profiles will help to improve human resource initiatives such as leadership development and selection. Furthermore, while the linkage between EI and perceptions of challenges were demonstrated, the behaviors and actions that are associated with these perceptions would extend this line of research. For example, it would be beneficial to understand which EI skills are more important to use at the beginning of a strategic aim change versus a growth maintenance phase. Future research in this area could also benefit from employing an objective measure of emotional intelligence. Objective instruments are relatively unaffected by self-concept, which could reduce any bias in the data caused by the subjective nature of the EQ-i.

In conclusion, the results of this study support the notion that high emotional intelligence skills are present in top executives and are related to performance. Top executives scored significantly higher than the general population in total EQ-i, in the composite areas of Intrapersonal, General Mood, and Adaptability, as well as in various subscales. Also, EI scores for Empathy, Self-Regard, Reality Testing, and Problem Solving were significantly related to profitability. Based on these results, leadership programs that encourage the development of EI skills may be useful in helping leaders to realize their potential.

References

- Ashkanasy, N.M. and Tse, B. (2000), "Transformational leadership as management of emotion: a conceptual review", in Ashkanasy, N.M., Hartel, C.E.J. and Zerbe, W.J. (Eds), *Emotions in the Workplace: Research, Theory, and Practice*, Quorum Books, Westport, CT, pp. 221-35.
- Atwater, L.E., Dionne, S.D., Avolio, B., Camobreco, J.F. and Lau, A.W. (1999), "A longitudinal study of the leadership development process: individual differences predicting leader effectiveness", *Human Relations*, Vol. 52, pp. 1543-62.
- Bachman, J., Stein, S., Campbell, K. and Sitarenios, G. (2000), "Emotional intelligence in the collection of debt", *International Journal of Selection and Assessment*, Vol. 8, pp. 176-82.
- Bar-On, R. (1997), *The Emotional Quotient Inventory (EQ-i): A Test of Emotional Intelligence*, Multi-Health Systems, Toronto.

-
- Bar-On, R. (2002), *Bar-On Emotional Quotient Inventory: A Measure of Emotional Intelligence (Technical Manual)*, Multi-Health Systems, Toronto.
- Bar-On, R. (2004), "The Bar-On Emotional Quotient Inventory (EQ-i): rationale, description and psychometric properties", in Geher, G. (Ed.), *Measuring Emotional Intelligence: Common Ground and Controversy*, Nova Science, Hauppauge, NY.
- Bar-On, R. (2005), "The Bar-On model of emotional-social intelligence", *Psicothema*, Vol. 17, in Fernández-Berrocal, P. and Extremera, N. (Eds), Emotional intelligence, special issue.
- Bar-On, R. and Parker, D.A. (2000), *Bar-On Emotional Quotient Inventory: Youth Version, Technical Manual*, Multi-Health Systems, North Tonawanda, NY.
- Barling, J., Slater, F. and Kelloway, E.K. (2000), "Transformational leadership and emotional intelligence: an exploratory study", *Leadership & Organization Development Journal*, Vol. 21, pp. 157-61.
- Bass, B.M. (1997), "Does the transactional-transformational leadership paradigm transcend organizational and national boundaries?", *American Psychologist*, Vol. 52, pp. 130-9.
- Butler, C.J. and Chinowsky, P.S. (2006), "Emotional intelligence and leadership behavior in construction executives", *Journal of Management in Engineering*, Vol. 22 No. 3, pp. 119-25.
- Carmeli, A. (2003), "The relationship between emotional intelligence and work attitudes, behavior and outcomes: an examination among senior managers", *Journal of Managerial Psychology*, Vol. 18 No. 8, pp. 788-813.
- Dawda, D. and 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*, Vol. 28, pp. 797-812.
- De Cremer, D. and van Knippenberg, D. (2004), "Leader self-sacrifice and leadership effectiveness: the moderating role of leader self-confidence", *Organizational Behavior and Human Decision Processes*, Vol. 95, pp. 140-55.
- Dulewicz, V. and Higgs, M. (2003), "Leadership at the top: the need for emotional intelligence in organizations", *International Journal of Organizational Analysis*, Special Issue: "Emotional intelligence and organizational behavior-II", Vol. 11 No. 3, pp. 193-210.
- Fox, S. and Amichai-Hamburger, Y. (2001), "The power of emotional appeals in promoting organizational change programs", *Academy of Management Executive*, Vol. 15, pp. 84-96.
- Fox, S. and Spector, P.E. (2000), "Relations of emotional intelligence, practical intelligence, general intelligence, and trait affectivity with interview outcomes: it's not all just 'G'", *Journal of Organizational Behavior*, Vol. 21, pp. 203-20.
- Gardner, H. (1983), *Frames of Mind: The Theory of Multiple Intelligences*, Basic Books, New York, NY.
- George, J.M. (2000), "Emotions and leadership: the role of emotional intelligence", *Human Relations*, Vol. 53, pp. 1027-55.
- Goleman, D. (1995), *Emotional Intelligence: Why It Can Matter More than IQ*, Bantam Books, New York, NY.
- Goleman, D. (1998), *Working with Emotional Intelligence*, Bantam Books, Toronto.
- Goleman, D., Boyatzis, R. and McKee, A. (2002), *Primal Leadership: Realizing the Power of Emotional Intelligence*, Harvard Business School Press, Boston, MA.
- Huy, Q.N. (1999), "Emotional capability, emotional intelligence, and radical change", *Academy of Management Review*, Vol. 24, pp. 325-45.

- Law, K.S., Wong, C. and Song, L.J. (2004), "The construct and criterion validity of emotional intelligence and its potential utility for management studies", *Journal of Applied Psychology*, Vol. 89, pp. 483-96.
- LePine, J.A., Hollenbeck, J.R., Ilgen, D.R. and Hedlund, J. (1997), "Effects of individual differences on the performance of hierarchical decision-making teams: much more than G", *Journal of Applied Psychology*, Vol. 82, pp. 803-11.
- Leslie, J.B. and Van Velsor, E. (1996), *A Look at Derailment Today: North America and Europe*, Center for Creative Leadership, Greensboro, NC.
- McClelland, D.C. (1999), "Identifying competencies with behavioral-event interviews", *Psychological Science*, Vol. 9 No. 5, pp. 331-9.
- Matthews, G., Zeidner, M. and Roberts, R.D. (2002), *Emotional Intelligence: Science and Myth*, The MIT Press, Cambridge, MA.
- Mayer, J. and Salovey, P. (1990), "Emotional intelligence", *Imagination, Cognition and Personality*, Vol. 9 No. 3, pp. 185-211.
- Mayer, J.D., Salovey, P. and Caruso, D.R. (2000), "Models of emotional intelligence", in Sternberg, R.J. (Ed.), *The Handbook of Intelligence*, Cambridge University Press, New York, NY, pp. 396-420.
- Mayer, J.D., Salovey, P. and Caruso, D.R. (2002), *Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT)*, Multi-Health Systems, Toronto.
- Mayer, J.D., Salovey, P. and Caruso, D.R. (2004), "Emotional intelligence: theory, findings, and implications", *Psychological Inquiry*, Vol. 60, pp. 197-215.
- Newsome, S., Day, A.L. and Cantano, V.M. (2000), "Assessing the predictive validity of emotional intelligence", *Personality and Individual Differences*, Vol. 29, pp. 1005-16.
- Pesuric, A. and Byham, W.C. (1996), "The new look in behavior modeling", *Training and Development*, July, pp. 25-33.
- Petrides, K.V. and Furnham, A. (2000), "On the dimensional structure of emotional intelligence", *Personality and Individual Differences*, Vol. 29, pp. 313-20.
- Riggio, R.E., Murphy, S.E. and Pirzolo, F.J. (2002), *Multiple Intelligences and Leadership*, Lawrence Erlbaum Associates, Mahwah, NJ.
- Rubin, R.S., Munz, D.C. and Bommer, W.H. (2005), "Leading from within: the effects of emotion recognition and personality on transformational leadership behavior", *Academy of Management Journal*, Vol. 48, pp. 845-58.
- Salovey, P. and Mayer, J.D. (1989), "Emotional intelligence", *Imagination, Cognition, and Personality*, Vol. 9, pp. 185-211.
- Slaski, M. and Cartwright, S. (2002), "Health, performance and emotional intelligence: an exploratory study of retail managers", *Stress and Health*, Vol. 18, pp. 63-8.
- Slaski, M. and Cartwright, S. (2003), "Emotional intelligence training and its implications for stress, health and performance", *Stress and Health*, Vol. 19 No. 4, pp. 233-9.
- Sosik, J. and Megerian, L. (1999), "Understanding leader emotional intelligence and performance: the role of self-other agreement on transformational leadership perceptions", *Group & Organization Management*, Vol. 24 No. 3, pp. 367-90.
- Stein, S.J. and Book, H.E. (2003), *The EQ Edge: Emotional Intelligence and Your Success*, Stoddart Publishing, Toronto.
- Stuart, A.D. and Paquet, A. (2001), "Emotional intelligence as a predictor of leadership potential", *Journal of Industrial Psychology*, Vol. 27 No. 3, pp. 30-4.

- Sue-Chan, C. and Latham, G.P. (2004), "The situational interview as a predictor of academic and team performance: a study of the mediating effects of cognitive ability and emotional intelligence", *International Journal of Selection and Assessment*, Vol. 12, pp. 312-20.
- Summerfeldt, L.J., Kloosterman, P.H., Antony, M.M. and Parker, J.D.A. (2006), "Social anxiety, emotional intelligence, and interpersonal adjustment", *Journal of Psychopathology and Behavioral Assessment*, Vol. 28, pp. 57-68.
- Van Rooy, D.L. and Viswesvaran, C. (2004), "Emotional intelligence: a meta-analytic investigation of predictive validity and nomological net", *Journal of Vocational Behavior*, Vol. 65 No. 1, pp. 71-95.
- Van Rooy, D.L., Viswesvaran, C. and Pluta, P. (2005), "An evaluation of construct validity: what is this thing called emotional intelligence?", *Human Performance*, Vol. 18, pp. 445-62.
- Zeidner, M., Matthews, G. and Roberts, R.D. (2004), "Emotional intelligence in the workplace: a critical review", *Applied Psychology: An International Review*, Vol. 53, pp. 371-99.

Corresponding author

Steven Stein can be contacted at: ceo@mhs.com