

EMOTIONAL INTELLIGENCE, EMOTION RECOGNITION, AND LEADERSHIP

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ABSTRACT

This research study evaluated emotional intelligence and emotion recognition and their ability to predict leadership capacity. The purpose was to identify the strongest predictors of leadership from a series of emotional intelligence factors and emotion recognition accuracy. A composite assessment was developed using a widely validated and accepted emotional intelligence test called the TEIQue-Short Form, a newly designed facial emotion recognition test, the Fullerton Emotion Recognition Survey (FERS) and a self-report leadership scale. Participants (n = 201) were assessed from both the undergraduate population at California State University, Fullerton as well as an online outreach campaign using Facebook and other social media outlets. Employing multivariate and stepwise regressions as well as basic correlations, the four main factors of emotional intelligence, all of which significantly predicted leadership capacity, were ranked in order of correlation strength with leadership. The FERS ultimately lacked reliability and validity however; the goal of adding complexity to the current available instruments remains a focus for future research.

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CHAPTER 1

INTRODUCTION

Emotional Intelligence, Emotion Recognition, and Leadership

Leadership is a broad construct that consistently proves simple to retrospectively measure but extremely difficult to predict (Neubert & Taggar, 2004; Walter, Cole, van der Vegt, Rubin, & Bommer, 2012). Leadership is influenced by multiple external factors such as culture, stress, and the complexities of interpersonal relationships, making the concept itself nebulous and ever evolving (Neubert & Taggar, 2004). It is, however, easily measured by post performance metrics. Interpersonally, it can be measured by instances of conflict. In sports, it can be measured with wins and losses. In business it can be measured with profitability and performance metrics (Goleman, 1998). Preemptively identifying individuals who will produce such results becomes the challenge and the reason that leadership identification and prediction is such an intriguing topic.

One way to accomplish this prediction is through intelligence testing, but established measures, such as IQ testing, are flawed. This is in part because the concept of intelligence and the use of intelligence testing are centuries old. Formal intelligence testing dates back to Sir Francis Galton in the late 1800's. He argued that intelligence was entirely genetic and used rudimentary physical as well as reaction time measurements to quantify sensory keenness (Gregory, 2013). Further generations of intelligence testing evolved to become IQ testing. Alfred Binet in the early 1900's used IQ testing as a means

of classifying young students who may have been ill prepared for academic life for both genetic and environmental reasons. Binet's assessments have a heavy verbal component, rendering some of his testing culturally invalid, however, he introduced important concepts such as fluid reasoning and working memory (Gregory, 2013). The main issue with these types of test was, and still remains, their inefficiency in actually predicting success in real life scenarios. While an individual's ability to practically apply their memory or the speed at which an individual can solve a complex set of math problems or even quickly interpret and redesign intricate block patterns all indicate important elements about that individual's intelligence, does it tell us anything about the true propensity for success in a social environment? Previous research has focused on expounding upon anecdotal evidence about highly intelligent individuals earning promotions, only to fail in leadership roles (Goleman, 1998).

In modern times, this type of IQ testing has been widely used as a method of aptitude and achievement assessment. It has been accepted as an indicator and predictor of performance potential in a vast array of arenas, from education, sports and the working world. As mentioned, intelligence testing falls very short in predicting the ability to navigate social scenarios, which is a quintessential trait of success and leadership (Gregory, 2013). While success is a vague term that can be defined in an infinite number of ways from financial wealth to fame to simple life satisfaction, in all cases, it is not well predicted with IQ tests. Leadership is clearly, not identifiable with this manner of testing. In order to design a proper test for this type of construct, leadership itself must be better understood.

Leadership

Because of its complex and evolving nature, defining leadership proves challenging. For the purpose of this study, leadership will be defined as the ability to improve social chemistry and group performance as well as the capacity for self-regulation of affect. Leadership skills are universally beneficial, regardless of professional arena, demographic, age, gender or individual goals (Kerr, Garvin, Heaton & Boyle, 2005). Leadership is an instrumental element of success in any way it is defined. While innumerable metrics are available to evaluate performance, clearly and quantifiably predicting an individual's ability to lead does not yet exist.

While a succinct, peer reviewed and accepted definition of leadership has yet to be developed, there is a set of clearly defined types of leadership. Styles such as authoritarian, where a leader simply dictates directives and procedures and maintains all decision making power, have been studied and, while accepted as useful in some scenarios, generally dismissed as unsuccessful. Other styles, such as paternalistic, or fatherly, democratic, as well as a hands off approach or laissez-faire leadership, are again shown to have their place in various environments but none prove universally beneficial or successful across the constantly evolving landscape of social relationships.

Transactional Leadership

In more recent times, additional types of leadership styles have emerged and are more complex in social chemistry and interaction. Transactional leadership is designed to place accountability in the control of the follower through the use of contractual agreements and extrinsic motivation (McCleskey, 2014). This type of leadership style focuses on the rewards and punishments predetermined by leaders and adhered to by

followers. This type of contractual relationship has many merits such as clear, unwavering goals and objectives.

Transformational Leadership

Transformational leadership focuses on charismatic leaders who are able to elevate followers' awareness and intrinsic motivations (McCleskey, 2014). Traits such as enthusiasm and optimism are central to success in this style of leadership. This widely studied and utilized leadership strategy incorporates a greater focus on followers and followership than of the leader (Gumusluoglu & Ilsev, 2009; Kendrick, 2011; Neale, 2005). Followers tend to see traits exhibited by the leader that they, themselves, try to emulate (McCleskey, 2014).

While there are many types of leadership, there is a flaw in the categorization of styles. They do not allow for adaptation. A paternalistic leader may work, and be supremely successful in some environments but should that environment change, what was once successful may find failure. Due to this flaw, researchers began studying traits of leaders rather than a categorized style.

Daniel Goleman

While the above-mentioned leadership types range from powerful, to traditional to arguably successful, they are all incomplete. Not incomplete because of a logistical or strategic flaw but because, as previously mentioned, leadership is an ever-evolving construct based on environmental variables. This is why the research of Goleman (1998, 2011) and his theories on emotional intelligence are critical to discussion of predicting leadership capacity. His research points not to one type of leadership style proving more successful than another, but to knowing how to use each style based on the parameters of

the situation (Goleman, 1998). While no follower looks to be commanded or dictated to, sometimes emergency scenarios occur where an authoritarian leadership style is imperative and must be adopted. In other situations, perhaps a follower or group of followers needs some paternalistic reassurance to improve chemistry. Goleman's research focuses on the decision making aspects of leadership through emotional mastery of oneself and others to further group cohesion and performance (Goleman, 1998, 2011; Goleman & Boyatzis, 2009).

Emotional mastery was used by Goleman (2011) in a business setting indicating that individuals high in cognitive intelligence were often not capable leaders while others of adequate IQ but high in emotional intelligence (EI) could be identified and trained for improved group performance. Goleman developed a four domain model of EI including self-awareness, self-management, social awareness and relationship management. He concluded that confidence, awareness of others' inner realities, one's ability to shape the feelings of those around them and interestingly, resistance to amygdala hijack, were all indicators of a leader. Amygdala hijack in lay terms is the natural ability to exhibit a muted reaction to fearful, high pressure or stressful situations (Goleman, 1998). Goleman developed four main factors of EI leadership.

Self-Awareness

Self-awareness is a consciousness about one's own emotion and the impact those emotions have on the individual but also the impact those emotions have on other individuals (Goleman, 2011).

Self-Management

Self-management is less of an awareness and more about putting ones emotions to work for the benefit of an environment (Goleman, 2011). An individual high in self-management has a sense of self control. These individuals are able to remain focused and attentive to the task at hand, as well as understand how moods and emotions impact outcomes.

Social Awareness

An awareness of not only ones internal reality but that others in the environment experience that same sort of internal, perceived reality is the concept of social awareness (Goleman, 2011).

Relationship Management

Empathy is perhaps the most important trait in leadership (Goleman, 2011). Deficits in this ability or so much as simply being momentarily unaware of the emotions of those around can make relationship management impossible.

From early in Goleman's research to his present work, he consistently identifies social intelligence or more specifically, emotional intelligence as the key predictor of leadership success (Goleman, 1998, 2011; Goleman & Boyatzis, 2009).

Emotional Intelligence

Intelligence testing is so inefficient in effectively predicting success in life that some researchers have spent careers coming up with reasons why people so often score high on IQ tests but then find little success in the real world (Gregory, 2013). These failures and shortcomings led to the concept of trait intelligences. Scientists such as Spearman, responsible for splitting intelligence into a general ability that he appropriately

coined “g” and specific abilities coined “s,” and Thurston’s broad 7 factor model of intelligence were the beginnings of factor intelligence assessment (Sternberg, 1985). What truly laid the ground work for the arguments and research found in this study was Gardner’s theory of multiple intelligences (Gardner, 1987). While he did not actually coin the phrase emotional intelligence, his study of various other traits such as linguistic, musical, spatial, inter-personal and intra-personal intelligences were instrumental in its creation.

Emotional intelligence was coined in 1990 as a form of social intelligence that involves 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 (Salovey & Mayer, 1990). This ultimately lead to Goleman’s (1998) theories which main-streamed the concept of EI and used it as an indicator of success and leadership in the social world. Emotional intelligence testing has become a factor for predicting successful leadership (Goleman, 1998). Unfortunately, Goleman’s work is largely focused on consulting and the incorporation of the research of others into his extensive background of books, newsletters and articles. In fact, much of his data driven work focused on Buddhism and meditation from the early 1970s (Goleman, 1976). His career has influenced studies such as the current study.

As EI has become more widely accepted as a predictor of organizational success and enhanced group performance, a need for valid and reliable assessments arose. The trait emotional intelligence questionnaire (TEIQue) was developed not only to give participants an overall EI score but also to rate their factors, broad components of EI, and facets, more specific components and factors (Petrides, 2009). For the purposes of this

study, the short form (TEIQue-SF) was selected. The TEIQue-SF contains 30 questions to establish an overall EI score as well as scores on the four broad factors, well-being, self-control, emotionality and sociability.

“Well-being” scores suggest a sense of peace or dismay based on previous successes and future potential. Individuals with high scores have a sense of positivity and fulfillment due to this reflection and outlook. “Self-control” scores indicate the degree of control over one’s impulses. This extends to the interpretation of external pressures and stress as well. “Emotionality” scores identify the degree to which an individual can express their own emotions and perceive the emotions of those around them. Last, “Sociability” in contrast with emotionality, has very little to do with internal emotional states. Sociability scores rather, identify an individual’s ability to be a social agent, and influence their social relationships and environment (Petrides, 2009).

Emotion Recognition

Simply identifying individuals with high EI is insufficient and incomplete in making predictions about leadership capacity. While regulation of emotion and influence over the emotions of others is inarguably important, an ability to assess, interpret and make decisions using nonverbal cues is also vital to this overall capacity. Therefore, the ability to read emotions displayed by an individual becomes a distinct focus in the assessment process. A study involving facial recognition utilized a facial action coding system (FACS) which measures muscle contraction in the face in the formation of emotions (Donato, Bartlett, Hager, Ekman, & Sejnowski, 1999). The FACS employs a system of 26 different action units (AUs) which are connected to various facial muscle cascades like an inner brow raiser, nose wrinkle or lip stretcher. While this study was

focused on the structures used to form and communicate emotions, the images utilized create highly valid emotional expressions which can be used to evaluate emotion recognition.

Predicting Leadership

The significance of this line of research and testing lies in its practical application and creates a method of selecting leaders in business and sports. The frequency of teams and businesses failing or at a minimum, falling short could be greatly reduced simply by choosing, influencing, promoting and training individuals who will elevate their peers and create a more cohesive social unit. This becomes the motivation for this study.

Utilizing a system of assessments, is it possible to predict leadership?

Current Study

The purpose of this study was to evaluate the strength of emotional intelligence (EI) in combination with emotion recognition (ER) in predicting leadership capacity. While there has been a tremendous amount of research connecting EI and leadership, simply identifying individuals with high EI is insufficient and incomplete in making predictions about leadership capacity (Goleman, 2014; Greenockle, 2010; Lindebaum & Cartwright, 2010; Sadri, 2012). The ability to read nonverbal cues and emotions is an important metric in the assessment process for this study. Unfortunately, there is no current, established, complex ER testing instrument. The reliable, validated instruments that exist, such as the Diagnostic Analysis of Nonverbal Behavior (DANVA2), simply lack in complexity. While these instruments are valuable for measuring an individual's ability to recognize simple emotions, currently limited to happy, sad, fearful and angry, a new measure is required to capture complex ER performance. The new measure,

designed for this study, is known as the Fullerton Emotion Recognition Survey (FERS). Scores from the TEIQue, FERS and leadership survey, will be combined and evaluated for their significance in predicting leadership.

EI was established using the TEIQue-SF, a widely validated, respected and accepted assessment instrument (Petrides, 2009). ER scores will be derived from the FERS which borrowed images from FACS studies. The scientific validity of the images in the FACS studies would allow this new instrument to be a valid measure of ER, as well. Finally, a leadership score was be collected using an online leadership self-assessment tool (LSAT) (Kehoe, 2016).

In addition to the primary measures, important demographic and social interaction data was collected. What makes EI such an important intelligence to study is that individuals high in EI are less likely to engage in harmful interpersonal behaviors and conflict, are more likely to avoid self-destructive behaviors such as smoking, excessive alcohol and drug abuse, or violence and also find more contentment and acceptance from their social network (Mayer, Salovey, & Caruso, 2004). These traits are universally beneficial to leadership, regardless of the scenario or setting.

The scores on the two assessments proposed for use, the TEIQue-SF, and the FERS were the independent variables in this study. The dependent variable was the LSAT score. Additional demographic and social interaction variables were evaluated for predictive and confirmatory relationships in various ways and included sex, age, ethnicity, and athletic experience. The behaviors most associated with individuals high in EI, avoiding alcohol and drug abuse, contentment with social networks and avoidance of interpersonal conflict were also evaluated for their relationship to leadership. These were

measured with questions in the demographics section and answered via likert or modified likert scales.

Hypotheses

Most importantly, it was hypothesized that individuals who scored high in general EI and also on the FERS would ultimately show a higher leadership capacity. This was analyzed by a multiple regression to test the combined predictive power of the two predictors. Second, it was hypothesized that participants who scored higher in EI would also score higher in ER. The third hypothesis suggested that individuals high in EI and LSAT will excel at recognizing positive emotions on the FERS. Finally, each instrument and demographic measure, was tested for simple correlations.

Significance

The significance of this line of research and testing lies in its practical application and creates a method of selecting leaders in business and sports among other arenas. The frequency of teams and businesses failing or, at a minimum, falling short of measurable performance markers such as profitability or win percentages, could be greatly reduced by choosing, influencing, promoting and training individuals who would elevate their peers and create a more cohesive social unit.

CHAPTER 2

METHOD

Participants

Participants were recruited in several ways. The first was a sampling of California State University, Fullerton (CSUF) psychology undergraduates using the SONA system. The SONA system is designed to give extra credit to undergraduates at CSUF in the psychology department for their participation in ongoing research studies. The second was through social networking via Facebook and twitter. Last, several upper division CSUF psychology professors were asked directly to distribute the survey to their students. These classes consisted of research methods, social psychology, health psychology and industrial/organizational psychology courses. While the controlled nature of classroom settings and face to face oversight and interaction are preferred, the vastly more cost effective nature of online instruments was employed. Ultimately, data were collected from participants (N = 201) ranging in age from 18 to 76 years with an average age of 29.82 (SD = 12.47).

Measures

TEIQue-SF

The first measure is a trait emotional intelligence survey called the TEIQue-SF (Petrides, 2009). It consists of 30 self-report items where participants report their answers on a 1 (completely disagree) to 7 (completely agree) scale. Questions vary in type, focus

and wording order with approximately one third written in reverse wording to ensure answers are accurate. Questions such as “on the whole, I’m a highly motivated person” and “I’m a follower, not a leader” are included in the assessment. The items are averaged together to form a general EI score ranging from 1 to 7. Similarly, a 1 to 7 score was generated for each of the broad EI factors of well-being, self-control, emotionality and sociability. This assessment, directly derived from the full form which includes 153 questions and is vastly more time consuming, has been shown to be valid and reliable. The TEIQue-Full Form had a Cronbach’s alpha value of .89 for females and .92 for males for global EI with a normative sample ($n = 1721$) (Petrides, 2009). The short form, which contains a sampling of two questions from each of 15 different specific facets in the full form, was found to have alpha values exceeding .87 for both men and women in two distinct studies (Cooper & Petrides, 2010). The researchers responsible for designing the short form used an item response theory analysis of the full form to choose the two questions per facet.

Fullerton Emotion Recognition Survey

The second measure is the emotion recognition assessment, the FERS. Twelve different emotion images were chosen from three different complexity variations. All images were of the same female individual expressing an array of emotions. The expressions included one neutral, six simple emotions such as happy, sad, angry and fearful, as well as three congruent complex emotions. Some examples of congruent complex emotions are sadly fearful and happily surprised (Du, Tao, & Martinez, 2014). These are considered congruent complex because the two simple emotions involved in the formation of the complex emotion are of equal representation and influence. For

instance, happily surprised, is expressed by combining the AUs associated with the emotions of happy and surprised equally. Neither is represented more strongly than the other. In contrast, two incongruent emotions were also included. These are considered incongruent because, while two simple emotions are being combined, similar to the congruent example of happily surprised, one of the simple emotions is more strongly emphasized than the other. For instance, the emotion appalled, is a combination of the simple emotions of disgust and anger but with an emphasis on disgust.

These facial images and associated emotions, while presented in a unique and novel way to participants in this study, were validated in previous research (Du et al., 2014). Previous research focused on the accuracy of the actual emotion displayed and the facial muscles involved in the formation of the emotion, not in how accurately an individual recognized the emotion. Their study coded, using AUs, 230 participants expressing the 22 different emotions. The AUs were consistently used allowing researcher to confirm each emotion using the FACS system. Researchers found that 70% of their participants used identical AUs in the formation of each emotion (Du et al., 2014). Given the strength of the Du et al. study in accurately identifying emotions, validation of the FERS images can be inferred.

Leadership Self-Assessment Tool

The third instrument was a leadership self-assessment tool and was made up of twenty questions yielding a score of 20 to 100 (Kehoe, 2016). Each question was associated with a 5-point scale with 1 being never and 5 being always. Kehoe (2016) suggests that results can be broken into four broad levels of leadership capacity. Less than 40 combined points suggest a weak leadership capacity. Forty to 59 points suggest

some capacity for leadership. Sixty to 79 points indicates a good leader and scores greater than 80 are considered an excellent leader. Examples of questions include from “Do I listen to people’s opinions?” and “Am I respected as a leader?”

There is no peer reviewed psychometric data available for the LSAT however the assessment creator had more than 30 years of experience working as an author, scholar and international business leadership consultant. He is a Fellow at the internationally recognized Institute of Management Consultants headquartered in North Palm Beach, Florida and has developed more than 400 leadership and management programs during his career.

Demographics

Last, a demographics page was included in the experiment. Some questions are standard and commonly seen in many areas of psychological testing like age, ethnicity and sex but items also were included based on current research and proposed concepts for this study. Data about instances of alcohol and drugs abuse, contentment with social networks and interpersonal conflict avoidance were collected. The questions were created for this study and were motivated by the available research about character traits common in individuals with a high level of EI (Mayer, Salovey, & Caruso, 2004). The demographic questions were developed to assess each participant’s experience with these conditions. Finally, a question about athletic experience was included as it is suggested that either sports participation improves leadership capacity or individuals higher in leadership capacity are drawn to athletics.

Procedure

The online instrument for this study was multidimensional with three distinct elements, each assessing a different skill or trait. All sections were administered sequentially, required no individual instruction between sections, and took approximately 15 minutes to complete. The participants were given a link to Qualtrics and were then required to read the directions for the study before proceeding. They were instructed to carefully, but quickly choose responses and then answer with the response most closely representative of their actual personality. The purpose of these instructions was to encourage participants to avoid overthinking answers which may lead to choosing socially desirable answers rather than personally representative answers. The TEIQue-SF, in particular, has questions that could be subject to this type of error and all attempts were made to limit the potential impacts of answering with anything but honest selections.

When developing the FERS, pilot studies, administered with paper and pencil, showed that when participants were evaluating the faces in section 2, there was a considerable amount of “flipping” between pages. Multiple images were used to compare different displayed emotions before choosing their answers. Even when specifically addressed during pre-assessment instruction, participants tended to try and employ this strategy when answering the questions. This required close attention and careful monitoring when participants were engaged in the task. Limiting the time exposure to these images was imperative to the validity and reliability of the FERS. Transitioning this assessment to an online form allowed for control of this confound. The Qualtrics version presented participants with an emotion image only for 3 seconds, followed by the same image and the 4 associated emotion choices displayed below the image for 3 seconds and

finally, the emotion choices only. While exposure to the emotion image was limited, exposure to the final slide where participants were asked to choose the emotion they perceived was untimed. Participants were able to take as long as necessary to make their selection but the images were no longer accessible. At no time were participants allowed to move backwards through the instrument and were required to answer before proceeding.

The final two sections were straight forward, and with little room for error due to the simplicity of the design. The only foreseeable area of concern was trust in accurate responses to demographic questions, especially regarding alcohol and drug use and legal issues stemming from alcohol and drug related offenses. During the instruction phase of the assessment process, it was reinforced that all answers would be kept confidential and anonymous and thus it can be assumed that participants did, in fact, answer accurately.

All data were collected anonymously with no chance of associating responses with the individual who completed the instrument. Individuals were thanked for their participation and no reward beyond this was offered.

CHAPTER 3

RESULTS

Preliminary Analysis

Raw data were collected from the assessments and evaluated with SPSS Version 22 in several ways. First, all instruments were evaluated for internal consistency. Cronbach's α revealed high reliability for the TEIQue-SF ($\alpha = .89$), extremely low reliability for FERS ($\alpha < .5$), and high reliability again for the LSAT ($\alpha = .87$). Sum scores for the TEIQue-SF, the FERS, and the Leadership scales were computed to yield a general score for EI, ER, and leadership capacity, respectively. The demographics data were collected and maintained by the researchers at California State University, Fullerton for post hoc testing. These data will be used in a number of analyses.

Demographics

Data were collected from participants ($N = 201$) ranging in age from 18 to 76 years with an average age of 29.82 ($SD = 12.47$). The majority of participants were female, 75.1% ($n = 151$) and 71.6% of the participants described themselves ethnically as white ($n = 144$). Interestingly, 82.1% of participants self reported having less than 5 total alcohol drinks or recreational drug use equivalent per week with only one ($n = 1$) participant reporting they were a heavy drinker, consisting of 20 or more drinks or equivalent per week. Legal issues stemming from alcohol and drug use were equally disproportionate with only 3% reporting a minor issue ($n = 6$) such as a misdemeanor or

community service. Consistent with current research, 67.2% of participants reported having considerable or complete satisfaction with their social network (n = 133) while only 2% reported being completely unsatisfied (n = 4). Finally, athletic experience was very evenly distributed with 11.9% reporting no athletic involvement (n = 24), 14.9% reporting little involvement (n = 30), 22.4% reporting moderate involvement (n = 45), 26.4% reporting considerable involvement (n = 53) and 24.4 reporting extensive involvement (n = 49) which included varsity college completion or national level competition.

Main Analysis

A multiple regression analysis (Equation 1) was conducted on the data predicting leadership capacity from TEIQue-SF and FERS and their interaction:

$$\text{Leadership} = b_0 + b_1\text{TEIQue} + b_2\text{FERS} + b_3\text{TEIQue} * \text{FERS} \quad (1)$$

Prior to analysis, both predictors were mean centered. The interaction (b_3) was non-significant $B = -.23$, ($t = .44$, $p = .66$), and therefore dropped from the model, and a more parsimonious model with main effects only was tested. Because the interaction (b_3) was non significant, there is no need to test simple slopes.

The final model indicated a significant effect of EI on leadership where the expected change in leadership was 8.45 ($t = 12.05$, $p < .001$) for every 1 unit increase on EI. ER was not a significant predictor of leadership ($t = .49$, $p = .62$). Together, the two predictors explain 42.6% of the variance in leadership. Additional regressions were run on the data controlling for age as well as sex but significance did not change.

A graph of the regression line can be seen in Figure 1 which shows the nature of the relationship between leadership and EI.

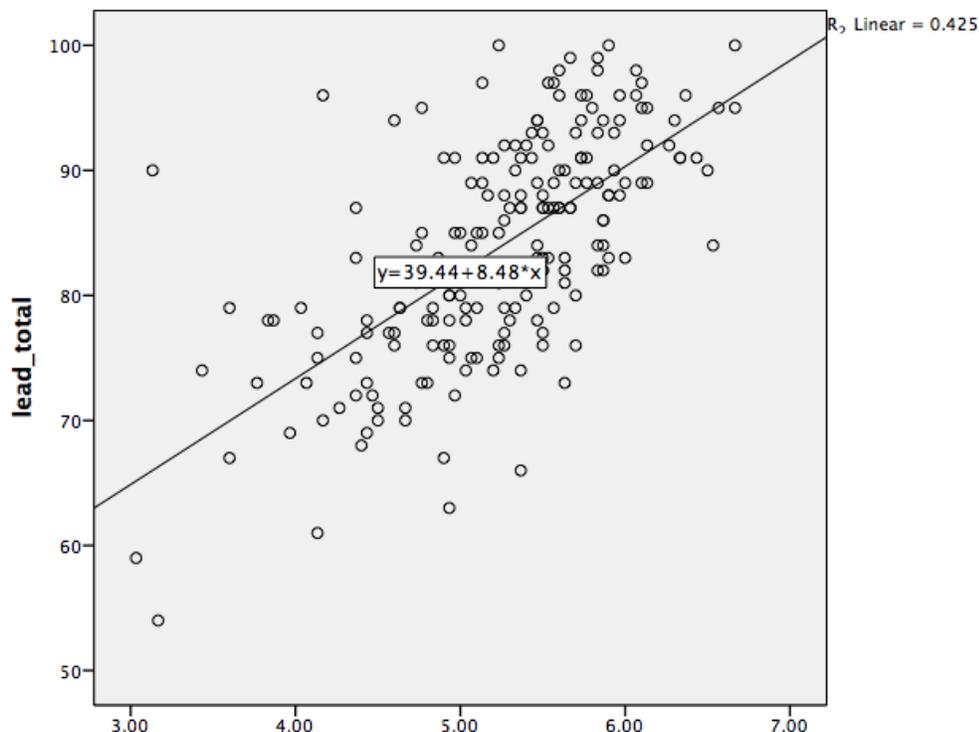


Figure 1. Graph of EI on Leadership Regression.

Secondary Analysis

Given that the TEIQue-SF was such a strong predictor of leadership, a stepwise regression was performed to determine how the subscales of the TEIQue-SF differentially predicted leadership. Similar to the main analysis, subscales were mean centered prior to analysis.

In this model, 44.7% of the variance in leadership was predicted by the TEIQue-SF subscales of emotionality, sociability and well-being. By completely removing ER as well as self-control from the model, the explanation of variance actually improved. This is further discussed in the closing chapters.

Emotionality was the strongest predictor with a standardized coefficient = .36 ($t = 5.73, p < .001$) and was the first variable entered in the stepwise regression. A score

increase of 3.782 on leadership can be expected for every one unit increase of emotionality for an individual who scores at the mean on sociability and well-being.

Sociability was the second strongest predictor with a standardized coefficient = .27 ($t = 4.53, p < .001$). A score increase of 2.528 on leadership can be expected for every one unit increase of sociability over and above emotionality for an individual who scores at the mean on well-being.

Well-being is the third strongest significant predictor with a standardized coefficient = .22 ($t = 3.55, p < .001$). A score increase of 2.159 on leadership can be expected for every one unit increase of well-being over and above the effect of emotionality and sociability for an individual.

Last, self-control was a non-significant and poor predictor of leadership variability and was left out of the model with partial correlation with leadership = .01 ($t = .11, p = .91$). These numbers did not meet the criteria for inclusion in the stepwise regression and indicated that self-control contributes little variability in the leadership score over and above the variability attributed to emotionality, sociability and well-being. This is not to suggest self-control was not a significant predictor when analyzed individually but simply that it explained no further variance when included with the other coefficients.

Correlational Results

Given the results of the regression model, it was not surprising that total leadership correlated strongly with global trait EI ($r = .65, p < .001$). Total leadership also had a significant negative correlation with legal issues stemming from drug and alcohol abuse ($r = -.17, p = .02$) suggesting that stronger leaders were less likely to have

experienced legal issues. Strong leaders were also significantly more likely to experience satisfaction with their social network ($r = .35, p < .001$). Finally, strong leadership, or the self perception of strong leadership was positively correlated with age ($r = .16, p = .02$).

Similarly, global trait EI was positively correlated with social network satisfaction ($r = .47, p < .001$) and age ($r = .22, p = .002$) and negatively correlated with legal issues from drug and alcohol abuse ($r = -.2, p = .005$).

Significance was found in other correlations relating to demographics as well. Recreational alcohol and drug use was positively correlated with age ($r = .34, p < .001$). Legal issues stemming from drug and alcohol abuse were negatively correlated with social network satisfaction ($r = -.21, p = .003$) and positively correlated with age ($r = .16, p = .025$). Finally, athletic experience was negatively correlated with age ($r = -.24, p = .001$).

Global Trait EI Subsets

The final analysis run on the data required leadership scores to be dichotomized into two groups. Individuals with strong leadership scores of 80 or greater ($n = 133$) were significantly higher on all subsets of EI than individuals with moderate to weak leadership scores of 79 or lower ($n = 68$; see Figure 2).

Table 1

Correlation Matrix

	1	2	3	4	5	6	7
1 Leadership	1.000						
2 Total EI	.661**	1.000					
3 Alcohol and/or drug use	.080	.110	1.000				
4 Legal issues	-.174*	-.196**	.079	1.000			
5 Social network satisfaction	.342**	.475**	.017	-.211**	1.000		
6 Athletic experience	-.031	.059	.008	-.049	-.042	1.000	
7 Age	.162*	.216**	.344**	.158*	.019	-.243**	1.000

Note. N = 201.

** Correlation is significant at the .01 level; * Correlation is significant at the .05 level.

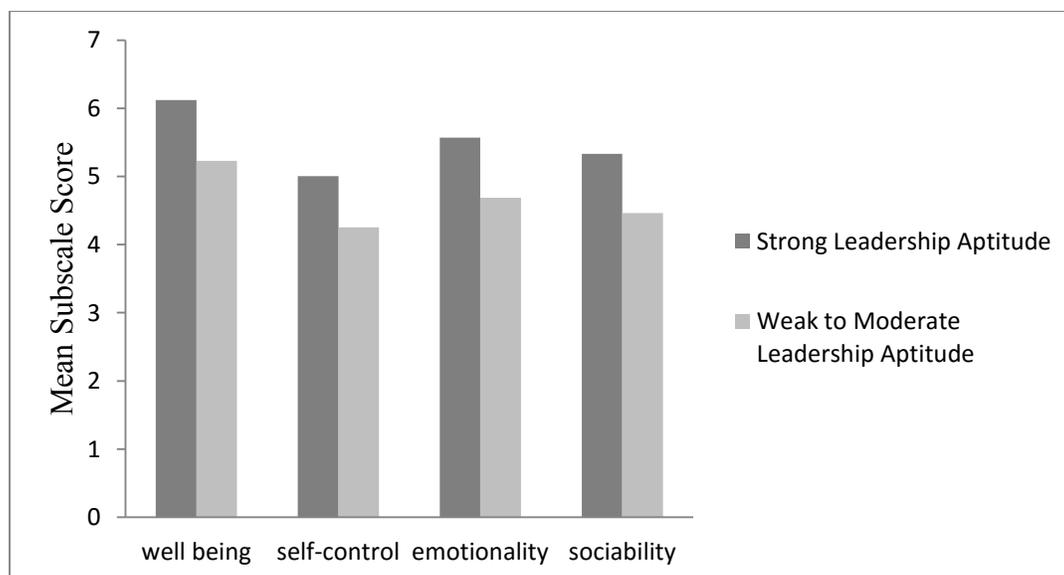


Figure 2. Graph of EI Subsets of Strong vs Moderate to Weak Leaders.

CHAPTER 4

DISCUSSION

The purpose of this thesis was to identify significant predictors of leadership and add complexity to the current body of work regarding ER.

Emotional Intelligence

Ultimately, EI was a strong predictor of leadership. This supports much of the current research and in particular, that of Goleman (1976, 1998, 2011). As mentioned in a review of the literature, none of the leadership theories that currently exist such as transactional and transformational, can possibly be considered a “best” type. This is because leadership is always changing and leaders must always learn from their past and adapt to their present and future situations and environments. This theory is what makes EI so powerful as a predictor of leadership success. This study suggests that individuals who are keenly aware of their emotional environments, are able to conduct themselves effectively, be aware of others, and make decisions with the information they gain from their social environments will possess the strongest capacity for leadership.

Analysis of the subsets of EI were quite robust and interesting. Anecdotally, the data indicate that a strong leader is not the most self-controlled of individuals but very aware of what their lack of self-control might do to themselves or others around them. Their emotionality as well as their capacity to influence others as a social agent are vastly more significant than their ability to calmly perceive stressful situations as a chance to

overcome an obstacle. EI subsets strongly support the argument that a charismatic, confident individual who can understand an internal and external social environment will ultimately have the greatest leadership capacity.

Clearly, leadership is not defined by EI but this was never the claim or hypothesis of this study. Many additional factors contribute to leadership capacity. An individual's dress, how they sound, how they look and even their postures can all be considered factors of leadership, but it can also be argued that none of those qualities or characteristics are relevant in the absence of EI. What this study and previous studies have shown is that EI is indeed, a powerful predictor of leadership. Interestingly, some indicators of successful leadership, as suggested for further research, have nothing to do with the leader at all.

Followership theories are an essential factor for analysis when evaluating leadership. As research by Sy (2010) suggests, the characteristics of the individuals being led and the dynamics of a group are often times, far more influential to the success of an organization than the leader. This brings about intriguing suggestions for future research and how the assessments in this study might be adapted to assess followers and group dynamics. While self-report measures are quintessential to psychological research, gaining insight into the differences of how someone in a leadership role rates themselves and their followers, and how followers rate themselves and the leader would make for robust data. This is a strong suggestion for future research.

Emotion Recognition

Unfortunately, the ER portion of this study was invalid and unreliable. Alpha levels suggest the FERS did not adequately test ER capacity. More assessment into what was wrong with the test is not only important for this study but for future research in the field. ER research at this point, is extremely limited. The identification and assessment of individuals who are highly skilled at reading emotions could prove vital. Researching this topic quickly revealed the void left by the lack of intricacy and complexity in current measures. Any hierarchical research using ER testing has either revealed weak correlations or inconclusive results (Mast & Darioly, 2014). This is not because ER is not a valuable skill or integral to the leadership process but because there is no test that adequately measures this construct.

FERS Outcome

As is clear from the results, the FERS faced several challenges. While it was non-significant in the main effect or interaction in the regressions performed on the data and all correlations, the measure itself was flawed. While the FACS and associated AUs are valid, the way in which they were adapted for the FERS requires further investigation. Superficially, the only images used were that of a female subject. This is not to suggest that one sex is better or worse at expressing emotions or that individuals are better or worse at reading emotions expressed by either sex, but rather that there is no control or comparison for analysis. In future iterations of this instrument, it is highly advisable to use subjects of both sexes and of varying ages.

There were also flaws in the presentation of the instrument. Participants saw three different, seamless slides for each image. The first was the image by itself and no

predetermined emotion word choices. The third slide was the predetermined emotion word choices and no image. In the third slide, participants were asked to make their best choice based on the image to which they had been exposed. The issue arose in the second slide where participants could see the image and the emotion word choices. Due to an oversight, participants were able to click on the choices during the second slide. If they did, in fact, click a choice on this slide, their response was not recorded and moved to the third slide where they were asked to make a final choice. This most likely was confusing to participants and may have impacted results. For future versions, either the second slide needs to be removed entirely or the ability to select answers must be removed.

There is also some question about image and word timing exposure. The selecting of 3 second intervals was only briefly piloted in lab meetings and through discussions with advisors. Simply creating several versions of the FERS, each with different time intervals of exposure, could itself generate an interesting study. The main interest in further versions of this study is not only internal consistency but also increased variation and distribution in total outcomes. Piloting this study with 1 second, 3 second, 5 second and 7 second intervals would elucidate which of these intervals best accomplishes those goals.

Finally, an argument has been presented that the multiple choice option invalidated the study. For each image, there were three emotion words as well as “cannot determine” after exposure to each image. This gives participants, a 33.3% chance to guess the correct emotion as less than 2% of the participants used the “cannot determine” option. This guessing effect could have significantly influenced the outcome. To correct this, a “fill in the blank” format has been suggested. If the interest in complexity is

maintained, this format may inhibit finding variation among the weakest ends of the ER spectrum but may offer a venue for identifying the elite in this skill set.

The biggest drawback to the failure of this measure is that it did not allow for a proper item analysis. The results of which would have been another valuable piece of information making this failure a distinct setback. Because validity and reliability measures were so inadequate, further testing into which types of emotions were recognized with the most accuracy across all main and demographic variables was not possible. If the FERS had been valid, statistical approaches could have shed light on questions about what specific types of emotions are best identified by a leader. It was hypothesized that a leader would be better at recognizing negative emotions. Additionally, individuals high in EI should be expected to perform better in recognizing complex emotions and even more so in recognizing incongruent complex emotions. It is with great hope that future versions of the FERS will allow opportunity for this analysis.

Correlations

Many interesting correlations arose from the data. Age was positively correlated with leadership as well as alcohol consumption but also significantly negatively correlated with athletic experience. The first two are reasonably expected as many younger individuals may not have had a chance to test their leadership mettle yet while older adults simply have more confidence in their leadership ability. Since the age range of participants included those below the legal drinking limit, finding the positive correlation between age and weekly alcohol and recreational drug consumption instances is also no surprise. The negative correlation between age and athletic experience was somewhat unexpected. Given that the vast majority of the sample was female, this could

simply be a sign of changing times. Rightly so, there is more opportunity for women in sports today than in previous decades.

Leadership was significantly positively correlated with social network satisfaction which entirely supports the EI subset findings. Emotionality and sociability are essential to both constructs. Perhaps the most interesting finding from these correlational findings was the negative relationship between legal issues stemming from drug and alcohol abuse with both leadership and global trait EI. This was a strong finding as only $n = 6$ participants had any legal issues. This sheds more light on individuals low in EI and leadership than those at the higher echelons. Individuals who participated in this study who were very low in EI and leadership tended to have experienced issues with drug and alcohol related legal offenses.

APPENDIX A
INFORMED CONSENT

Informed consent: Please read this section carefully and choose an option at the bottom of the page.

CSUF DEPARTMENT OF PSYCHOLOGY

You are being asked to participate in a study conducted by graduate student Trevor Basil and faculty advisor Dr. Kris Beals in the Department of Psychology, California State University, Fullerton. You are being asked to participate because you are an English speaking adult 18 years of age or older.

* By completing the following survey, you are agreeing to participate in this research study*

PURPOSE: The purpose of this study is to understand the predictive capacity of emotional intelligence and emotion recognition on leadership.

PARTICIPATION: This study involves reflecting on your personal traits and experiences regarding how you deal with you own emotions, the emotions of others and your ability to recognize emotions in others. You will also be asked to reflect on your leadership traits and tendencies as well as a set of completely confidential demographic questions.

POTENTIAL RISKS AND BENEFITS: The content of this survey poses no foreseeable risk. If any questions cause you discomfort, you have the right to discontinue your participation in the study at any time. Benefits include participating in, and contributing to psychological research.

COMPENSATION: You will receive no compensation for your participation.

VOLUNTARY PARTICIPATION: Please understand that your participation is completely voluntary. Your decision whether or not to participate will in no way affect your current or future relationship with your institution or its faculty, students, or staff. You have the right to withdraw from the research at any time without penalty. You also have the right to refuse to answer any question(s) for any reason, without penalty.

CONFIDENTIALITY: Confidentiality will be provided to the extent allowed by law. Your name is not requested; all responses will be treated anonymously. Your individual privacy will be maintained in all publications or presentations resulting from this study. Your name and all responses to the survey will be kept confidential by the researcher. All surveys will be kept in a locked cabinet in a laboratory space at CSUF.

FOR ADDITIONAL INFORMATION: If you have any questions, or would like to obtain a copy of the findings from this research, please contact Trevor Basil at tbasil@csu.fullerton.edu or Kris Beals at kbeals@fullerton.edu. If you have any questions about the rights of human research participants, contact the CSUF IRB Office at (657) 278-7640 or at irb@fullerton.edu. The CSUF IRB Office has reviewed this project.

APPENDIX B

TEIQue-SF

Instructions: Please answer each statement below by putting a circle around the number that best reflects your degree of agreement or disagreement with that statement. Do not think too long about the exact meaning of the statements. Work quickly and try to answer as accurately as possible. There are no right or wrong answers. There are seven possible responses to each statement ranging from ‘Completely Disagree’ (number 1) to ‘Completely Agree’ (number 7).

1 2 3 4 5 6 7

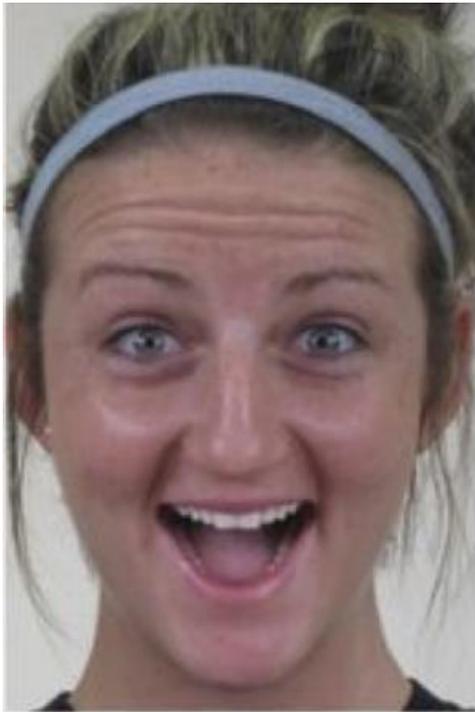
**Completely
Disagree**

**Completely
Agree**

1. Expressing my emotions with words is not a problem for me.	1	2	3	4	5	6	7
2. I often find it difficult to see things from another person’s viewpoint.	1	2	3	4	5	6	7
3. On the whole, I’m a highly motivated person.	1	2	3	4	5	6	7
4. I usually find it difficult to regulate my emotions.	1	2	3	4	5	6	7
5. I generally don’t find life enjoyable.	1	2	3	4	5	6	7
6. I can deal effectively with people.	1	2	3	4	5	6	7
7. I tend to change my mind frequently.	1	2	3	4	5	6	7
8. Many times, I can’t figure out what emotion I’m feeling.	1	2	3	4	5	6	7
9. I feel that I have a number of good qualities.	1	2	3	4	5	6	7
10. I often find it difficult to stand up for my rights.	1	2	3	4	5	6	7
11. I’m usually able to influence the way other people feel.	1	2	3	4	5	6	7
12. On the whole, I have a gloomy perspective on most things.	1	2	3	4	5	6	7
13. Those close to me often complain that I don’t treat them right.	1	2	3	4	5	6	7
14. I often find it difficult to adjust my life according to the circumstances.	1	2	3	4	5	6	7
15. On the whole, I’m able to deal with stress.	1	2	3	4	5	6	7
16. I often find it difficult to show my affection to those close to me.	1	2	3	4	5	6	7
17. I’m normally able to “get into someone’s shoes” and experience their emotions.	1	2	3	4	5	6	7
18. I normally find it difficult to keep myself motivated.	1	2	3	4	5	6	7
19. I’m usually able to find ways to control my emotions when I want to.	1	2	3	4	5	6	7
20. On the whole, I’m pleased with my life.	1	2	3	4	5	6	7

21. I would describe myself as a good negotiator.	1	2	3	4	5	6	7
22. I tend to get involved in things I later wish I could get out of.	1	2	3	4	5	6	7
23. I often pause and think about my feelings.	1	2	3	4	5	6	7
24. I believe I'm full of personal strengths.	1	2	3	4	5	6	7
25. I tend to "back down" even if I know I'm right.	1	2	3	4	5	6	7
26. I don't seem to have any power at all over other people's feelings.	1	2	3	4	5	6	7
27. I generally believe that things will work out fine in my life.	1	2	3	4	5	6	7
28. I find it difficult to bond well even with those close to me.	1	2	3	4	5	6	7
29. Generally, I'm able to adapt to new environments.	1	2	3	4	5	6	7
30. Others admire me for being relaxed.	1	2	3	4	5	6	7

APPENDIX C

FERS

- A) Happy
- B) Fearfully Surprised
- C) Happily Surprised
- D) Cannot Determine



- A) Sadly Disgusted
- B) Fearfully Surprised
- C) Angrily Disgusted
- D) Cannot Determine

APPENDIX D

LEADERSHIP SELF-ASSESSMENT

Instructions: Please answer each statement below by putting a circle around the number that best reflects your degree of agreement or disagreement with that statement. Do not think too long about the exact meaning of the statements. Work quickly and try to answer as accurately as possible. There are no right or wrong answers. There are seven possible responses to each statement ranging from ‘Completely Disagree’ (number 1) to ‘Completely Agree’ (number 7).

1 2 3 4 5

**Completely
Disagree**

**Completely
Agree**

1. Do I make tough decisions that must be made?	1	2	3	4	5
2. Do I make decisions on time?	1	2	3	4	5
3. Do I listen to people’s opinions?	1	2	3	4	5
4. Do I incorporate people’s opinions or explain why I am not using them?	1	2	3	4	5
5. Am I trusted by others?	1	2	3	4	5
6. Do I resolve non-performance of others in my team?	1	2	3	4	5
7. Am I sensitive to the needs and perspectives of others?	1	2	3	4	5
8. Am I clear and explicit in communications?	1	2	3	4	5
9. Am I open to new ideas and better ways of doing things that differ from my own?	1	2	3	4	5
10. Do I treat people equally?	1	2	3	4	5
11. Am I aware of the impact that I have on others?	1	2	3	4	5
12. Do I create engagement – do people want to follow my lead?	1	2	3	4	5
13. Am I aware of my assets and liabilities as a leader?	1	2	3	4	5
14. Do I show people how to learn and develop when they don’t get it right?	1	2	3	4	5
15. Am I seen as honest and ethical?	1	2	3	4	5
16. Do I encourage people to be candid with me without fear of repercussions?	1	2	3	4	5
17. Do I assess the need for and provide direction and support for individual people for their key tasks?	1	2	3	4	5
18. Do I give recognition and feedback for both efforts and results?	1	2	3	4	5
19. Do I resolve conflict between myself and others or others within my team?	1	2	3	4	5
20. Am I respected as a leader?	1	2	3	4	5

APPENDIX E

DEMOGRAPHIC QUESTIONS

What is your sex?

- MALE
 FEMALE

What is your age?

How would you describe yourself ethnically?

- White
 Hispanic
 Asian
 African American
 Native American
 Other

What is your satisfaction with your social network (friends, family, work, acquaintances)?

- Completely Unsatisfied
 Some Satisfaction
 Moderate Satisfaction
 Considerable Satisfaction
 Completely Satisfied

What is your typical alcohol and/or recreational drug use per week?

- None
 Little (Less than 5 drinks or equivalent per week)
 Moderate (5 to 10 drinks or equivalent per week)
 Considerable (10 to 20 drinks or equivalent per week)
 Extensive (20 or more drinks or equivalent per week)

Have you ever experienced legal issues stemming from alcohol or drug use?

- No
 Minor (Misdemeanor, Community Service)
 Major (Felony, Court Ordered Rehabilitation, Jail)

What is your experience with athletics

- None
 Little (Some youth)
 Moderate (Some High School)
 Considerable (Varsity HS or Some College)
 Extensive (Varsity Collegiate or National Level Competition)

How often do you find yourself engaging in interpersonal conflict regardless of severity?

- Never
 Very Infrequently (Less than 3 instances per year)
 Moderate (3-9 instances per year)
 Frequently (10-30 instances per year)
 Constantly

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