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Effect of Emotional Experiences on Emotional Intelligence Among U.S. Military Leaders

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Walden University
2016

Abstract

Effect of Emotional Experiences on Emotional Intelligence Among U.S. Military Leaders

by

Robert Crosby

MBA, Walden University, 2010

BS, Wright State University, 2004

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Management

Walden University

November 2016

Abstract

Military veterans may have constructive skills and abilities in emotional intelligence (EI) that assist in managing emergencies, crises, and relationships. However, according to U.S. government-employment statistics, the joblessness rate of military veterans is up to 400% higher than that of nonveterans. The paucity of research conducted on the relationship between EI and prolonged intense emotional experiences, such as those experienced during military deployments, lessens the abilities of these veterans to market their EI skills in the pursuit of employment. The purpose of this quantitative nonexperimental survey study was to observe, evaluate, and compare the Wong and Law Emotional Intelligence Scale scores of military veterans regarding combat or humanitarian mission experience. The research questions addressed whether military leaders with combat or humanitarian mission experiences score higher on EI tests than veterans without deployment experience. The Mayer and Salovey EI model, experiential learning theory, and general causation theory served as the theoretical basis for this study. Data accrued from 132 randomly selected military leaders, analyzed through an analysis-of-variance test and the Welch test of equality of means, indicated a significant statistical relationship between a combination of combat and humanitarian mission experience and EI scores, $F(1, 59.506) = 38.062$, $p < .05$. This result indicates that veterans with both combat and humanitarian mission experiences have increased EI scores when compared to veterans without combined combat and humanitarian mission experiences. All other hypotheses were statistically insignificant. The results may help veterans decrease the disparity in joblessness rates compared with those among nonveterans and may aid human resource managers to locate competent candidates for employment.

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Dedication

I dedicate my dissertation research study to the current and former members the United States Army, Air Force, Navy, Marines, and Coast Guard for the freedom they provide. I also dedicate this dissertation to my wife and soulmate, Elisabeth Crosby. Her support, inspiration, and encouragement enabled me to realize this accomplishment.

Acknowledgments

My first thanks go to God, without whom none of this is possible. This research would not have been successful without guidance and mentoring from the following Walden University faculty members: Chairperson Dr. Salvatore Sinatra, who not only coached and counseled me but also taught me what it means to be a scholar practitioner; Dr. David Gould, who provided insight into research methods and procedures, and who provided much needed lucidity; and Dr. Judith Forbes, who served as the university research reviewer. None of this would have been possible without the care and support of my wife Lisa, who gave me a shoulder to cry on and a kick in the pants, both of which were necessary. Special thanks goes to Don Bishop and InDyne for their support and generosity, both of which were greatly appreciated.

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Chapter 1: Introduction to the Study

Military veterans who have completed their terms of service and are attempting to enter the civilian workforce are often at a disadvantage, evidenced by the discrepancy in the unemployment rates of military veterans and their civilian counterparts (Joint Economic Committee, 2012). Military veterans often possess vast amounts of experience in managing personnel and tasks (Mula, 2013). Through practice, they have learned the importance of managing their own emotions and the emotions of those with whom they relate in the course of their duties (Johnson, 2013). Veterans who have served in combat or on humanitarian missions have endured high-stress environments that have tested the veterans' abilities in using emotional intelligence (EI; Rizzo et al., 2011).

Veterans may be skilled at managing relationships with stakeholders and identifying and prioritizing these stakeholders (Minnis & Wang, 2011). Veterans may also be skilled in many styles of leadership and in ascertaining how the situation and personnel at hand can dictate which leadership style will be more effective and appropriate (Harms, Krasikova, Vanhove, Herian, & Lester, 2013). These skills come with experience and practice. The need to acquire these skills is amplified in the cases of veterans who have served in environments where their lives, the lives of those with whom they serve, and the lives they are deployed to protect are in danger (Grundlingh, 2012). The study into the effect that these powerful emotional events have on the EI of participants was previously undertaken. In this chapter, I present the background of the study, problem statement, purpose of the study, and research questions that inform the study. This chapter also includes sections on the theoretical foundation for the study,

assumptions relevant to the study, significance of the study, scope and delimitations of the study, and pertinent limitations of the study.

Background of the Study

The focus of this study was on whether intense emotional experiences that transpire within an extended period, such as combat and humanitarian missions, have a positive affect on the EI of participants. Researchers have not previously undertaken a study on the experiences that deployed military leaders have observed on veterans' EI scores and abilities. Researchers have not sufficiently studied EI, and many scholars do not accept EI as a workable paradigm that correlates individual and occupational success with EI (Walter, Cole, & Humphrey, 2011). EI aligns with the skill and competence to understand emotions in oneself and others, manage these emotions, use them in relationship management (Jadhav & Gupta, 2014), and manage the pressures accompanying personal emotions and the emotions of others (Austin, Saklofske, Smith, & Tohver, 2014). Studies have been conducted that link EI with leadership effectiveness and emergence (Brackett, Rivers, & Salovey, 2011; Cavazotte, Moreno, & Hickmann, 2012; Sadri, 2012). In addition to contributing to workplace performance, EI contributes to success in all aspects of an individual's life (Sewell, 2011). Furthermore, Zeidner, Mathews, and Roberts (2012) attributed EI to overall better health, personal well-being, and stress management in those who score higher on self-report EI evaluations.

Many corporations and institutions are now conducting internal EI training for employees, and external organizations have emerged to provide consultation, education, and certification for EI (Joseph & Newman, 2010). Researchers conducted studies aimed at determining whether EI training is effective and concluded that education and

instruction in EI led to increased EI scores of participants (Dacre Pool & Qualter, 2012; Kirk, Schutte, & Hine, 2011; Nelis, Quoidbach, Mikolajczak, & Hansenne, 2009). Roy and Chaturvedi (2011) conducted a study of print-media organizations in India and found that job experience does have a positive effect on EI. Studies suggested that EI can improve with training and experience, and that veterans who have served in highly emotional and stressful situations may have higher EI scores because of exposure to these conditions.

In this quantitative nonexperimental survey study, I used an analysis of variance test and the Welch test of equality of means to evaluate and compare the EI scores of military leaders who served in strong emotional deployments with EI scores of those who did not serve in strong emotional assignments. The goal was knowledge about the effects of strong emotional experiences on EI. To my knowledge, no other studies have investigated the effect of experience on EI; thus, extant literature has a major gap, in part remedied by the present study.

Problem Statement

Military veterans suffer from considerably higher rates of unemployment than do their nonveteran counterparts. The U.S. unemployment rate is almost 400% higher for young post-9/11 veterans, at 30.2%, than for nonveterans, which stands at 8.7% (Joint Economic Committee, 2012). Although researchers have identified a strong positive relationship between EI and transformational leadership (Leigh, 2012; Mula, 2013), the study of EI is still not fully accepted by the academic community and management researchers (Cherniss, 2010). Many unemployed veterans could be candidates for leadership positions in civilian organizations. The problem is the deficiency in knowledge

with regard to the influence that emotional experiences have on the EI of military leaders. To help mitigate this gap, I focused on determining whether a causal relationship exists between emotional experiences in combat and humanitarian missions and the EI of military leaders.

Purpose of the Study

The purpose of this quantitative nonexperimental survey study was to observe, evaluate, and compare the EI scores of military leaders who served in strong emotional deployments with the EI scores relative to those who did not serve in strong emotional assignments to enhance knowledge of how strong emotional experiences affect EI. Results indicated a significant statistical relationship between a combination of combat and humanitarian mission experiences and EI scores, as measured by the Wong and Law Emotional Intelligence Scale (WLEIS), the results of this study could improve the prospects of some veterans to find work in the civilian community after their military service is complete. A causal-comparative design permitted me to compare the EI scores of veterans who have served in emotional situations with the EI scores of veterans who have not served in these environments.

Research Question(s) and Hypotheses

The topic that informed this research was whether unemployed U.S. military veterans who have served in either combat or on humanitarian missions possess an untapped resource in their EI skills and abilities that would be of value to civilian employers. Researchers who have studied workplace experience and EI have determined that experience on the job can positively affect scores attained on EI tests (Roy & Chaturvedi, 2011). In addition, EI is a skill that can be learned through training and

education (McEnrue, Groves, & Shen, 2009; Nelis et al., 2011; Turner & Lloyd-Walker, 2008). These concepts led to the development of the central question for this study: Do the training and experience that military leaders undergo in preparation for and during deployment on combat or humanitarian missions increase their EI abilities? I evaluated four research questions in this study, based on the central research question:

1. What is the relationship between combat experience and EI, as measured by the WLEIS?

   $H_0 1$: No statistically significant relationship exists between military leaders' scores on the WLEIS and their combat experiences.

   $H_a 1$: A statistically significant relationship emerges between military leaders' scores on the WLEIS and their combat experiences.

2. What is the relationship between military humanitarian mission experience and EI, as measured by the WLEIS?

   $H_0 2$: No statistically significant relationship exists between military leaders' scores on the WLEIS and their humanitarian mission experiences.

   $H_a 2$: A statistically significant relationship emerges between military leaders' scores on the WLEIS and their humanitarian mission experiences.

3. What is the relationship between a combination of combat and military humanitarian mission experiences and EI, as measured by the WLEIS?

   $H_0 3$: No statistically significant relationship exists between military leaders' scores on the WLEIS and their combined combat and humanitarian mission experiences.

H_a3: A statistically significant relationship emerges between military leaders'

scores on the WLEIS and their combined combat and humanitarian

mission experiences.

4. To what extent does a statistically significant difference exist between the

scores military leaders with combat experience achieve on the WLEIS

compared to the scores military leaders with humanitarian mission experience

achieve on the WLEIS?

H_04: No statistically significant difference exists between the scores that

military leaders with combat experience achieve on the WLEIS compared

to the scores that military leaders with humanitarian mission experience

achieve on the WLEIS.

H_a4: A statistically significant difference exists between the scores that

military leaders with combat experience achieve on the WLEIS compared

to the scores that military leaders with humanitarian mission experience

achieve on the WLEIS.

Theoretical Foundation

Three theories composed the theoretical foundation for this study. I used EI

theory to explain the importance of understanding one's emotions and those of others, as

well as the relationship of EI and leader–follower success. Experiential learning theory

(ELT) helped explain how EI can improve in military leaders through the emotional

experiences they encounter during deployments. The general theory of causation (GTC)

assisted in elucidating how the application of an independent variable can induce a

change in a dependent variable.

Emotional Intelligence Theory

As reported by Abe (2011), "According to the emotional intelligence (EI) theory, emotions provide us with vital information for making sense of our inner experiences and navigating our social environment" (p. 817). Mayer and Salovey initially developed EI theory in 1990 (Mayer, Salovey, & Caruso, 2004). The theorists proposed that EI consisted of abilities and skills related to understanding emotions and emotional information. Others have advanced theories that describe EI as a trait more closely related to personality than to intelligence (Cherniss, 2010; Petrides, 2010). A third group has proposed mixed-model theories, contending that EI comprises both traits and abilities (Bar-On, 2010; Cherniss & Goleman, 2001). Authors use the words *skill* and *ability* interchangeably in the ability and mixed-model theories. Researchers generally consider skills to be attributes that, with training, are learnable and improvable. Abilities, in contrast, are attributes that are genetic and inherited. If EI is a skill, it is teachable. Researchers have conducted studies and determined that EI can improve (Grant, 2007; McEnrue et al., 2009; Nelis et al., 2009; Turner & Lloyd-Walker, 2008). This does not preclude EI from containing a genetically based ability component. Currently, no single definition or model of EI exists. Cherniss (2010) noted the following:

> Rather than try to put forth one model as the only correct one, it might be better to formulate a single definition of EI. This common definition can then be used to determine which collections of abilities and traits are true models of EI. Such an approach assumes that . . . a multiplicity of different models [can exist] even though . . . [only] a single definition [exists]. (p. 114)

Experiential Learning Theory

ELT has been in use since the late 1970s in supervision, education, study, and performance. Kolb built on the foundational works of Dewey, Lewin, and others to develop this theory, averring that learning advances through experience and is unremitting (Chan, 2012). Researchers use ELT to explain how people learn independently in their own manners, based on their reactions to experiences that occur in the course of their existences (Yardley, Teunissen, & Dornan, 2012). Emotions couple with experiential learning. LeBlanc, McConnell, and Monteiro (2015) wrote, "For example, the role of emotions is discussed in some models of experiential learning, where learning occurs through having an experience and reflecting around it" (p. 276). EI aligns with transforming details and, therefore, is disposed to relate markedly to an extended refinement of personal occurrences and advanced assimilated reasoning (Abe, 2011). Experiential learners translate events and bestow on them individual significance; then change their behaviors based on these perceptions (Yardley et al., 2012). ELT is an appropriate theory for this study because deployed military leaders are constantly learning about their emotions and the emotions of others while they are experiencing these emotions in extreme situations.

General Theory of Causation

Pearl's (2012) GTC is extremely simplistic, stating that a probability exists that a change occurred to the dependent variable if an independent-variable treatment occurred and that the change to the dependent variable would not have occurred if the independent-variable treatment had not occurred (VanderWeele & Richardson, 2012). GTC is different from other theories in that it requires a means to articulate causal

information that is acceptable for scholarship and a method to synthesize scientifically that information to derive causal inferences about a circumstance (Pearl, 2012). Causality refers to the association of occurrences in which causal elements exist (Goodman, Ullman, & Tenenbaum, 2011). Pearl acknowledged that not all questions that involve causal relationships can be resolved with experimental studies due to counterfactual associations.

Causality occurs when an independent variable(s) applied to the subject has an effect on the dependent variable to be analyzed (Imai, Keele, Tingley, & Yamamoto, 2011). EI can improve and be cultivated by using training programs (Dulewicz & Higgs, as cited in Chaudhry & Usman, 2011). Nelis et al. (2009) conducted a study on the ability to train and retain EI and found that 6 months after training, without reinforcement, participants preserved their EI scores. Roy and Chaturvedi (2011) found that job experience can have a considerable positive effect on the EI scores of employees. The causal process is as follows: one can learn and teach EI; EI increases with events and practice; soldiers receive some EI training before engaging in potential conflict; the situations that soldiers encounter in combat or on humanitarian missions influence them; and as a result, the EI of soldiers who have been deployed in combat or on humanitarian missions will elevate compared with the EI of soldiers who have not had similar experiences (Figure 1).

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┌─────────────────────────────────────┐
│   EI Training Leads to Increased EI  │
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│   Combined With Exposure to Extreme  │
│        Emotional Experiences         │
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│ Leads to Higher-Than-Average EI Scores for │
│ Veterans who Have Served in Combat or on    │
│        Humanitarian Missions                │
└─────────────────────────────────────┘
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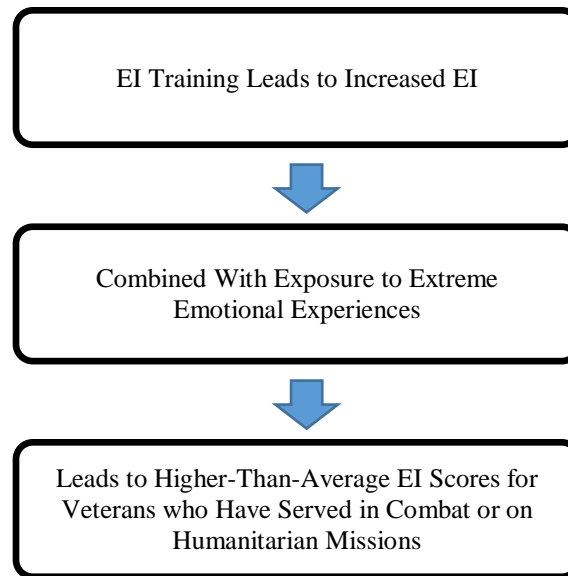
Figure 1. Process for improvement of emotional intelligence for deployed veterans.

Abbreviation: EI, emotional intelligence.

Nature of the Study

The method of inquiry for this study was quantitative. Because others have not yet conducted this type of research, based on a review of current literature, a quantitative approach allowed the gathering of empirical evidence to determine whether a causal relationship emerged between combat or humanitarian mission experience and EI. I used a cross-sectional survey to ensure participants could participate in a natural environment and because it was not possible to evaluate their EI scores before potential combat or humanitarian mission deployments. A cross-sectional survey design allowed participants to contribute to the study in an informal setting, which helped improve the external validity of the research (Maruyama & Ryan, 2014). Another reason for a cross-sectional survey design study was that military veterans have already been exposed to one form of the independent variable (combat or humanitarian mission experience). A cross-sectional

approach is also appropriate when confounding variables, which can affect the

relationship between the dependent and independent variables (Hsiang, Burke, & Miguel,

2013), cannot be controlled or eliminated and will not be evaluated.

Definitions

I used the following definitions in the study:

Combat: "Direct ground combat is engaging an enemy on the ground with

individual or crew served weapons, while being exposed to hostile fire and to a high

probability of direct physical contact with the hostile force's personnel" (Burrelli, 2013,

p. 4).

Emotional intelligence (*EI*): Mayer and Salovey provided a generally

acknowledged description of emotional intelligence (EI) as the capacity to assess,

correctly distinguish, and communicate emotions; the capacity to retrieve and produce

feelings to assist reasoning; the capacity to appreciate feelings and emotional

understanding; and the capacity to control feelings to advance emotional and cerebral

development (as cited in Song et al., 2010).

Humanitarian mission: Peacekeeping missions conducted by the U.S. military to

protect civilians, provide humanitarian assistance, and ensure the basic human rights of

noncombatants or relief efforts, following natural disasters (Goss, 2013).

Leadership: Process by which a person influences others to accomplish an

objective and directs the organization to make it more cohesive and coherent (Grant,

2012; Sharma & Jain, 2013).

U.S. military veteran: Any person who has served in the U.S. military and was

discharged under conditions other than dishonorable (U.S. Congress, 2012).

Assumptions

Two assumptions were relevant to this study. The first assumption was that the measurement instrument was valid and could establish scores for EI among U.S. military veterans. Researchers have used the WLEIS successfully to evaluate the EI of military personnel in previous dissertations (Calloway, 2010; Mula, 2013). Pan et al. (2014) identified the Cronbach's alpha of the overall scale as .92 and the Cronbach's alphas of the four subscales as .84 for self-emotion appraisal, .92 for other's emotion appraisal, .70 for regulation of emotion, and .90 for use of emotion. Libbrecht, Beuckelaer, Lievens, and Rockstuhl (2012) found that even after the WLEIS was translated into Dutch, it still "exhibited high internal consistency (lowest Cronbach's α value was .74)" (Libbrecht et al., 2012, p. 227).

The second assumption was that participants would answer the survey honestly. Self-report questionnaires and surveys are susceptible to respondents providing inaccurate responses when they believe they will benefit by presenting themselves in a more advantageous light through their answers (Ingold, Kleinmann, König, & Melchers, 2014). Respondents are more likely to be truthful in surveys that are anonymous in nature rather than surveys that are directly attributable to the participant (Warner et al., 2011). I assumed respondents' answers were more likely to be accurate and honest because participants remained anonymous in this study, and participants were not able to benefit personally.

Scope and Delimitations

This study focused on the EI of military veterans who had served in combat or on humanitarian missions for at least 6 months. A baseline group consisted of veterans who

had not served in either capacity. Veterans who served in combat or on humanitarian missions for fewer than 6 months were not included in the combat or humanitarian mission groups in this study. This eliminated the need to evaluate the incremental effect of shorter duration deployments on EI. Because military deployments do affect the EI of veterans, researchers could pursue a study to evaluate the accumulative effects of deployments on EI.

I made comprehensive attempts to match the ethnic and gender configuration of U.S. military respondents as closely as possible. This helped eliminate inaccuracies from oversampling one ethnic or gender group over another in this study. It was not possible to obtain an exact ethnic or gender match because all participants were volunteers. The purpose of this study was not to evaluate the EI of different ethnic or gender groups, and no data were analyzed based specifically on race or gender.

Limitations

Three limitations pertained to this study. The inability to test the same set of participants before and after deployment was a limitation to the research methodology of this study. The ideal situation would allow for a purely experimental approach with several different units from each branch of the U.S. military, but that was not possible for this study. For this reason, I selected a cross-sectional approach, which allowed me to examine the effects of independent variables that have already been applied.

Time was also a limiting factor. Each participant who completed the survey had to sign up on SurveyMonkey.com and then respond to the questions, thereby donating their valuable time. Using the Internet to apply the EI-evaluation instrument helped alleviate this burden on the participants. Using the WLEIS also reduced the amount of time

required to complete the survey because the survey does not contain as many questions as other EI assessment instruments. Other instruments also require an outside organization to scale the instrument, which would have added to the length of time required to gather and develop data.

Funding was another limitation in this study. Many EI-evaluation instruments are available only at significant cost to the researcher. For example, the cost to administer the Emotional and Social Competence Inventory is $225. Many EI instruments also require substantial training for the researcher. To reduce the costs for this study, I used the WLEIS, which is free for research purposes with permission granted by Wong. The WLEIS also does not require certification or additional training for the researcher and is easily incorporated into a survey that participants can take online.

Significance of the Study

A study of this type is unprecedented, to my knowledge, and the results of this study could form the basis of future research projects. Although many leaders and managers acknowledge EI as a vital skill that can positively affect not only a company's achievement but also personal success, EI is not entirely acknowledged by academics (Cherniss, 2010). If researchers conclude, as a result of this study, that exposure to prolonged emotional events significantly affect the EI scores of study participants, additional studies would be warranted that evaluate the effects of the length of exposure and the intensity of the exposure to emotional events on individuals. The conclusions resulting from this study could help make the EI construct an accepted field of study and improve its standing among scholars and researchers.

Deductions drawn from this research may alter the impression that many have of military veterans and show that they are capable individuals who have grown in the area of EI due to their assignments and experiences. Because the results of this study demonstrated that emotional experiences, within an extended period, positively affect EI scores and abilities of deployed military leaders, these enhanced abilities could be exploited by personnel departments and employers to improve the overall EI of their organizations. In addition, the results of this study could lead to improved training in the field of EI for predeployed military leaders, better preparing them for combat and humanitarian missions.

Summary and Transition

I designed this study to determine the extent to which a relationship exists between prolonged exposure to emotional events and increased EI levels. Veterans with combat or humanitarian mission experience may be able to leverage the results of this study to find work. Many military veterans have received training on leadership and have served in leadership positions. EI relates positively to leadership and organizational accomplishment. Researchers have associated higher levels of EI with professional and personal success (Obradovic, Jovanovic, Petrovic, Mihic, & Mitrovic, 2013; Sewell, 2011; Walter et al., 2011). EI also positively relates to workplace satisfaction (Brunetto, Teo, Shacklock, & Farr-Wharton, 2012; Ealias & George, 2012). Many organizations conduct EI training to increase the EI of their personnel, so it is intelligible that establishments would seek to find personnel who already have improved EI skills.

This research will increase knowledge in the field of EI because researchers have not previously conducted studies into emotional exposure and EI levels. Analysis in this

study will help fill the gap that exists due to the lack of investigation into this phenomenon. This quantitative study established, statistically, the extent to which military veterans who have been subjected to extended emotional experiences undergo a change in EI levels because of having participated in combat or humanitarian mission deployments. The WLEIS was the instrument used to evaluate the EI of the study participants.

In Chapter 1 of this dissertation, I provide outlined and introduced the study, study's purpose, and problem statements. Chapter 2 is a literature review of current literature related to EI, leadership, and military deployments. Chapter 3 comprises the methodology that I used to conduct the study. The results of the study appear in Chapter 4. In Chapter 5, I interpret the findings, make recommendations for future research, and draw conclusions.

Chapter 2: Literature Review

EI is a relatively new field of study, related to the human experience and dating to approximately 450 BCE with Socrates and students. Goleman brought the topic into the public domain and accelerated its study among academics in 1995. Conflicting arguments debate regarding whether EI is an ability with which people are born or a skill that can be taught and improved. Most proponents of ability-based EI use the two constructs interchangeably, which can add to the confusion. Many EI paradigms exist, but scholars study and champion four primary models. The four models and their variations have numerous measurement instruments that also have many variations. Researchers determined that individual EI scores can improve and that improvements in EI scores have a lasting effect through time. Ealias and George (2012) recommended that business organizations adopt EI training programs to improve commitment, reliability, and honesty, and to control change. Zeidner et al. (2012) believed that EI should not be an exclusive area of study and belongs in the realm of personality and, as such, is not a unique intelligence.

The purpose of this quantitative nonexperimental survey study was to observe, evaluate, and compare the WLEIS scores of military veterans regarding combat or humanitarian mission experience. EI relates to improved performance in the workplace as well as in one's personal life. Many researchers established a link between EI and transformational leadership (Ferguson, 2014; Meredith, 2008; Mula, 2013; Spano-Szekely, Quinn Griffin, & Clavelle, 2016) and that people with higher EI scores and skills are better able to manage stress and continue to function despite increased pressure (Saklofske, Austin, Mastoras, Beaton, & Osborne, 2012; Schneider, Lyons, & Khazon,

2013). Military personnel who were deployed to combat zones or on humanitarian missions are subjected to stresses that rival or exceed those of any other occupation (Kensing, 2014). Due to increased stress and extremely emotional situations, service members who have been deployed are more likely to be successful if they have received training on EI in the predeployment phase (Lilley, 2012). In the following literature review, I expand on each of these topics and expose the gap that exists in the study of emotional experiences and EI scores. Table 1 provides an overview of the topics in this chapter.

Table 1

Topics and Key Findings of the Literature Review

Topic	Key finding
EI	Mayer and Salovey provided a generally acknowledged description of EI as the capacity to acknowledge, understand, and manage the emotions of self and of others.
History of EI	The concept of EI has roots that date back to Socrates and the Greek philosophers (Chopra & Kanji, 2010).
EI models	The four major models in the domain of EI scholarship are the Goleman model, the Mayer-Salovey model, the Bar-On model, and Petrides's model, also known as the trait emotional intelligence model (Cherniss, 2010).
Measuring EI	Several constructs measure an individual's EI (Schutte et al., 1998).
Improving EI	Researchers have shown that EI can improve through training.
Opposition to EI	Several contingents argued that EI is not a valid construct or is not worthy of research, ranging from a lack of consensus on the definition, to whether a relationship exists between EI and job performance, and whether measures to test for EI are valid.
Modern leadership theory	Leadership theory has advanced from leadership trait theory to transformational leadership.
EI and transformational leadership	According to Warrick (2011), a characteristic of transformation leaders is that they are skilled in EI.
EI and stress	EI skills demonstrated by managers can acutely influence the stress of subordinates and thereby increase performance and employee satisfaction (Rahim, 2010).
Predeployment	The predeployment phase of combat or humanitarian missions marks the beginning of an emotional cycle for not only deploying military members, but also for their families (Pincus, House, Christenson, & Adler, 2001).
Combat	Armed combat is one of the most emotionally demanding predicaments a person can encounter (Rizzo et al., 2011).
Humanitarian missions	Humanitarian service conducted by the military implies the use of force to protect civilians and prevent infringements to their basic human rights as well as to provide humanitarian assistance (Goss, 2013).

Note. EI = emotional intelligence.

Literature Search Strategy

For the literature review, I used Google Scholar and the Walden University

Library databases to find articles, books, and dissertations on research topics related to

this dissertation. I linked the Google Scholar database with the Walden University

Library and used the Walden source, where possible, to minimize the requirement to pay

for articles and to ensure articles were peer-reviewed. In the Walden Library, I explored the Academic Search Complete, Business Source Complete, ProQuest Dissertations and Theses, Emerald Management, and PsycARTICLES databases, as well as the Thoreau tool to search multiple databases. The key search terms I used were *emotional intelligence*, *emotional intelligence theory*, *emotional intelligence and leadership*, *emotional intelligence and military*, *improving emotional intelligence*, *emotional intelligence and education*, *emotional intelligence and experience*, *emotional intelligence and stress*, *evaluating emotional intelligence*, *military deployments*, *emotion and military combat*, *military humanitarian missions*, *leadership theory*, and *causal process theory.* I also used the works cited sections from peer-reviewed articles and seminal authors to research additional literature that I did not find using a database.

I focused the search for literature from 2011 to present with the exception of seminal works. My goal was to have at least 85% of the references used in this dissertation published within the last 5 years. With the exception of seminal books and Internet sites that originated from seminal authors, all articles and literature that I used in this dissertation were peer-reviewed or from a U.S. government agency. In my initial research, I found only one article related to the topic of EI and experience. I did not find any literature on EI and extreme emotional experiences. To overcome this dearth of literature on the topic, I concentrated my search on topics and literature peripherally related to EI and emotional experiences.

Theoretical Foundation

The foundation of this study was centered on EI theory, ELT, and GTC. I used EI theory to elucidate how understanding one's emotions and those of others can affect a

person's individual and professional life. I used ELT to explain how people can learn and grow through their life and professional experiences. I used the GTC to explain how the administration of an independent variable can result in a change in a dependent variable.

Emotional Intelligence Theory

EI theory describes the significance of understanding one's emotions and those of others as well as how emotions are an integral part of our relationships and experiences (Abe, 2011). Mayer and Salovey first constructed a theory about EI in 1990 (Mayer et al., 2004) establishing EI as comprising the abilities and skills associated with comprehending emotions, emotional information (such as body language and facial expressions), and using that knowledge to advance cognition. The authors developed a four-factor model for ability-based EI and as a means to test and evaluate an individual's EI (Mayer et al., 2004). Petrides (2010) proposed an independent model of EI, contending that EI is a trait and not an ability (Cherniss, 2010). Petrides developed a different instrument to test EI. Another faction viewed EI as a combination of abilities and traits and developed a mixed model that represents this viewpoint (Bar-On, 2010; Cherniss & Goleman, 2001). The proponents of ability-based EI and the mixed model describe EI as a skill and as an ability.

If EI is a skill, it can be taught and developed with education and instruction. If EI is an ability, it is hereditary and not as amenable to training. In studies of the effectiveness of EI instruction and training, researchers concluded that EI can be enhanced (Grant, 2007; McEnrue et al., 2009; Nelis et al., 2009; Turner & Lloyd-Walker, 2008). To date, a distinct definition of *EI* does not exist (Cherniss, 2010). A specific

definition would establish the collection of characteristics that constitute EI and refine the skill rather than continuing the ability-versus-trait dispute.

EI theory was appropriate for this study because the purpose of the study was to evaluate the EI scores of U.S. military veterans. Many researchers investigated EI and its relationship to other phenomena. Mula (2013) used EI theory to investigate the relationship between EI and transformational leadership in leaders in the U.S. Army National Guard. Baker (2012) incorporated EI theory into a study of EI and conflict resolution styles of U.S. National Guard leaders. Calloway (2010) employed EI theory in a study of EI and transformational leadership in military leaders.

Experiential Learning Theory

Kolb established ELT in the 1970s. Researchers use ELT to explain how a person can learn by contemplating what the person has done and what the results were of the person's actions (Manolis, Burns, Assudani, & Chinta, 2013). Individuals can learn independently from formal education by analyzing their own experiences and comparing those with the consequences of their actions (Yardley et al., 2012). Emotion connects to ELT because it can influence the amount of information retained as a result of experience (LeBlanc et al., 2015). ELT and EI further align because EI can determine how an individual manages information related to personal emotional situations (Abe, 2011). People alter their conduct based on how they decipher events and the consequence they assign to their experiences (Yardley et al., 2012).

ELT is an appropriate theory for this study because veterans who serve in combat or on humanitarian missions encounter situations in which they must learn more about their emotions and the emotions of others from their experiences and from the

consequences of good and bad decisions related to these emotions. Yardley et al. (2012) used ELT to explain how medical students learn from hands-on experiences in clinical workplaces. Passarelli and Kolb (2012) used ELT to clarify how students who are learning abroad convert their experiences into intelligence. Li, Mobley, and Kelly (2013) used ELT to explain how global leaders learn cultural intelligence through international experience.

General Theory of Causation

Pearl's (2012) GTC is quite basic, stating that if a researcher applies an independent variable, a probability exists that the dependent variable will change and that the dependent variable would not change without the application of the independent variable (VanderWeele & Richardson, 2012). The GTC differs from other theories because it requires a means to communicate causal information that is up to research standards and is capable of being statistically manipulated to evaluate whether a causal supposition can be made about a phenomenon (Pearl, 2012). Goodman et al. (2011) noted that causality occurs when cause-and-effect elements interact to form connections. Counterfactual associations can prevent the experimental investigation of causal relationships (Pearl, 2012).

The GTC is appropriate for use in this study because it will help explain how combat and humanitarian mission experience can lead to change in a veteran's EI. Russo (2011) used the GTC to add a *mechanistic interpretation* to the structural modeling of causality. Researchers la Bastide-van Gemert, Stolk, van den Heuvel, and Fidler (2013) referenced the GTC as the basis for their work in developing causal-inference search algorithms in their work in life-course epidemiology.

Literature Review

History of Emotional Intelligence

The concept of EI has roots that date to Socrates and the Greek philosophers (Chopra & Kanji, 2010). Thorndike originally conceived EI as social intelligence early in the 20th century (as cited in Hess & Bacigalupo, 2014). Cherniss (2000) noted that, in addition to Thorndike, Wechsler also contended that other intuitive and emotive factors contribute with intelligence to influence a person's success in life. Gardner, in 1983, proposed the idea of multiple intelligences, including an *interpersonal* aspect that combines to form a person's overall intelligence (as cited in Brackett et al., 2011). Meisler and Vigoda-Gadot (2014) credited Salovey and Caruso with originating the term *emotional intelligence*, although Payne used the phrase in the title of a 1985 doctoral dissertation, a study about relating to emotions.

The topic of EI was not well known publicly until the release of Goleman's seminal book, *Emotional Intelligence,* in 1995 (Ybarra, Kross, & Sanchez-Burks, 2014). The overriding premise of Goleman's book was that EI could be more important than an individual's cognitive intelligence (IQ) as it relates to the person's success in business and life (Goleman, 1995). Business leaders who were searching for a means to predict worker and leader success embraced Goleman's theory; by 2000, more than half of U.S. businesses accepted the idea that outstanding performance relates to EI characteristics (Cherniss, 2000). Whitman, Van Rooy, Viswesvaran, and Kraus (2009) noted that from 2000 to 2009, researchers had written at least 1,171 articles that contained EI as keywords; and prior to 2000 only 106 articles had included the keywords *emotional intelligence*.

A divide persists in the study of EI regarding whether it is an ability that is innate or a skill that can be learned or improved (Fortner, 2013). Multiple models and theories relate to EI that range from social skills to consciousness of emotion and the composition of individual character (Joseph, Jin, Newman, & O'Boyle, 2015). Of the many models, four are considered major models (see Figure 2) in the domain of EI scholarship: the Goleman model, the Mayer-Salovey model, the Bar-On model, and Petrides's model, also known as the trait-emotional-intelligence model (Cherniss, 2010). Each major model couples with its own assessment approach, ranging from self-assessment and report to multirater evaluation and ability-based tests (Cherniss, 2010). Other researchers have altered the assessment tools developed for EI models to meet their own research needs or to improve them for validity.
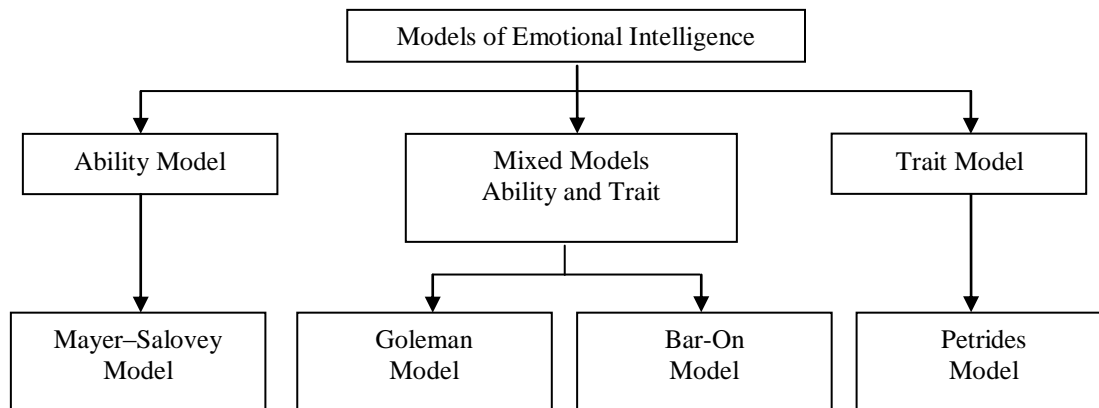
Figure 2. Models of emotional intelligence.

Emotional Intelligence Models

Goleman model. Goleman is a Harvard-educated psychologist who worked for *The New York Times* as a science journalist before writing a 1995 book (Cherniss, 2000). Of the four major EI models, Goleman's is the most unsophisticated and easily understood as well is the most read by nonacademics (Meredith, 2008). Goleman referred

to the domains of EI as skills or abilities upon which one can make improvements

(Goleman, 1995). Goleman expanded on this initial work, delineating the EI model into

five distinctive groupings: self-awareness or perception of personal emotions, self-

management or control of personal urges, empathy, the awareness of others emotions,

and social abilities (Goleman, 1998). Goleman linked EI capacity to leadership and

positive outcomes in a person's professional and private life (as cited in Ahmetoglu,

Leutner, & Chamorro-Premuzic, 2011).

      Goleman worked with Boyatzis and Rhee (Segon & Booth, 2015) to further

categorize EI into two competencies: the EI competency, which contains clusters of self-

awareness and self-management; and the social intelligence competency, which contains

clusters for social awareness and relationship management (see Figure 3). The emotional

self-awareness cluster affects people's ability to be in tune with their own flaws and

capabilities and fully understand their own emotions, or as Goleman described it,

"knowing what one feels" (Cherniss & Goleman, 2001, p. 30). Emotional self-

management relates to the skill to control negative influences, such as apprehension and

temper, and to restrain emotional whimsy (Cherniss & Goleman, 2001). Social awareness

addresses an individual's ability to discern the emotions of others and determine whether

a person is a threat or can be trusted (Cherniss & Goleman, 2001). Relationship-

management skill uses the first three abilities to enable an individual to manipulate the

feelings of others (Cherniss & Goleman, 2001). Goleman (1995) proposed that a person

can learn EI and it typically amplifies as a person ages.

Goleman's Model
Mixed Model with 2 Competencies

Emotional Intelligence Competency

1. Self-Awareness

2. Self-Management

Social Intelligence Competency

1. Social Awareness

2. Relationship Management
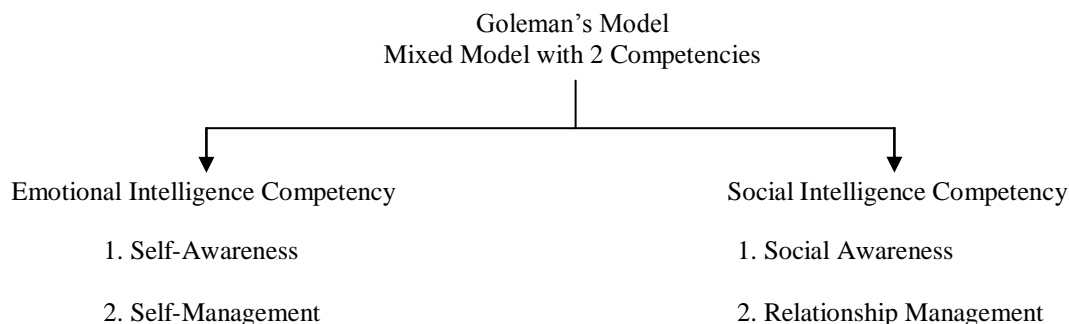
Figure 3. Goleman's model of emotional intelligence.

Mayer-Salovey model. Mayer and Salovey approached the concept of EI from a different perspective. In addition to fostering an understanding and an expression of emotions, their model incorporates EI with the ability to retrieve or produce feelings that ameliorate cognition with the goals of managing emotions, of encouraging emotional clarity, and of improving intellectual capacity (Ybarra et al., 2013). Caruso later jointed Mayer and Salovey in researching EI, often referenced as the Mayer–Salovey–Caruso model. Of the four primary EI models, the Mayer–Salovey model is the only one based strictly on ability. Ability-based EI is analogous to thinking about emotions and refining emotional comprehension, whereas trait EI is "more akin to personality traits and focuses on the self-reported perception and evaluation of emotions and their capacity to manage emotionally based situations" (Di Fabio & Saklofske, 2014, p. 175). Some scholars argued that the ability-based model is authentic because it is free from the characteristics associated with traits of personality (Ermer, Kahn, Salovey, & Kiehl, 2012; Song et al., 2010). In their study, Killgore et al. (2012) determined that ability-based EI uses more gray matter in the brain than trait-based EI, due to understanding and managing emotions.

In 1997, Mayer and Salovey combined what they described as higher and lower level skills relating to emotions into a four branch model (Grunes, Gudmundsson, & Irmer, 2014). The four branch model (see Figure 4) comprises the ability to correctly recognize one's own emotions and those of others; the competency to use emotions to empower the thought process; the capacity to comprehend emotions, the vernacular of emotions, and the physiological and nonverbal cues expressed through emotions; and the skill to achieve objectives by managing emotions (as cited in Føllesdal & Hagtvet, 2013). In contrast to Goleman, Bracket et al. (2011) argued that even though EI progresses as a person gets older, the skills related to EI can also improve through training.

```
                    Mayer–Salovey Model
                 Ability Based with Four Branches


  Recognize Emotions                          Comprehend Emotions
  (one's own and others')                     (verbal and nonverbal)

            Manage Emotions            Use Emotions
            (one's own and others')    (to facilitate thought and action)
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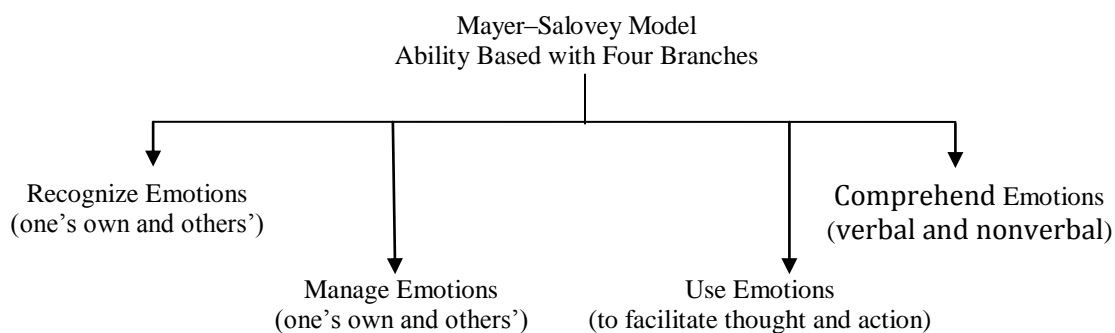
Figure 4. Mayer–Salovey model of emotional intelligence.

Bar-On model. The Bar-On model is different from the Goleman and the Mayer–Salovey models in that it incorporates stress management and overall frame of mind or mood into the emotional-awareness paradigm (Di Fabio, Palazzeschi, & Bar-On, 2012). EI, or emotional-social intelligence, the term Bar-On used in place of EI (Di Fabio et al., 2012), is a collection of emotive aptitudes and skills that aid a person's capacity to advance in the face of individual and situational burdens and stresses (Matthews, Roberts,

& Zeidner, 2004). Bar-On described a person who has a high emotional-quotient (EQ)

score as having the capacity to create constructive change and maintain individualized

actualization (Bar-On, 2010). Bar-On further emphasized the positive effect EI can have

on a person, writing, "EI has a significant effect on (a) human performance,

(b) happiness, (c) well-being and (d) the quest for meaning in life, all of which are the

focus of interest in positive psychology" (Bar-On, 2010, p. 57). A problem with the

model is that it relies heavily on personality characteristics that are difficult to assess and

modify.

     The Bar-On model (see Figure 5) comprises the five categories of intrapersonal

skills, interpersonal skills, adaptability, stress management, and general mood (Di Fabio

et al., 2012). Each category has subcomponents of the parent category: Intrapersonal

skills are self-regard (self-respect and self-assuredness), emotional self-awareness

(acknowledging an understanding one's own emotions), assertiveness (the ability to

articulate feelings and to stand up for oneself), self-actualization (knowing one's personal

skills and abilities and seeking self-improvement), and independence (the ability to fulfill

one's own emotional needs, to be self-reliant, and emotionally independent). The

interpersonal-skills category contains the subelements empathy (understanding others'

emotions and showing genuine concern), social responsibility (behaving responsibly and

ethically), and interpersonal relations (the give-and-take of kindness, the display of

compassion, and being contented in relationships). Adaptability comprises reality testing

(understanding the true nature of situations), flexibility (being able to adapt emotionally

to situational changes), and problem solving (willingness to confront issues, being

pragmatic, and solving them). Stress management contains the subelements stress

tolerance (acceptance of change and the ability to respond positively to stress) and

impulse control (understanding and controlling impetuous desires). The final primary

category, general mood, comprises optimism (feeling hope and displaying a positive

outlook even when confronting hardship), and happiness (satisfaction, enthusiasm, joy

for life, and the ability to have a good time).
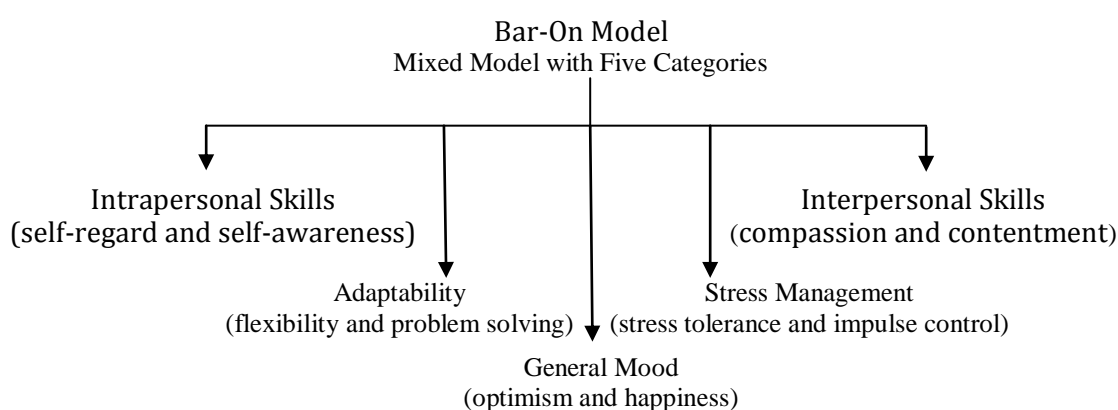
Figure 5. Bar-On model of emotional intelligence.

Petrides model. The Petrides (2010) model is sometimes referenced as the trait

EI model and is the newest of the four models, amalgamating the other three major

models and considered to be "second generation" (Cherniss, 2010). The Petrides model,

which allows for *operationalization* in measurement, applies to research because of the

nature of the study of EI, which is difficult due to the subjective characteristics of

emotions (Van der Linden, Tsaousis, & Petrides, 2012). The operationalization of the

Petrides model self-report measurement instrument differentiates it from the Bar-On

model and the Mayer–Salovey model (Petrides & Furnham, 2006). The trait EI model

focuses EI on the four characteristics of well-being, self-control, emotionality, and

sociability (Sánchez-Ruiz, Hernández-Torrano, Pérez-González, Batey, & Petrides,

2011). Each of the four characteristics (see Figure 6) are further defined: Well-being

aligns with self-assurance and bliss, sociability links to purposefulness and the

management of the emotions of others, self-control relates to managing external pressures

and avoiding impetuosity, and emotionality associates with compassion and

understanding one's own emotions and those of others (Cherniss, 2010). The Petrides

model views EI as a personality feature, located in the minor regions of personality,

rather than one of cognitive ability (Petrides, Pita, & Kokkinaki, 2007).
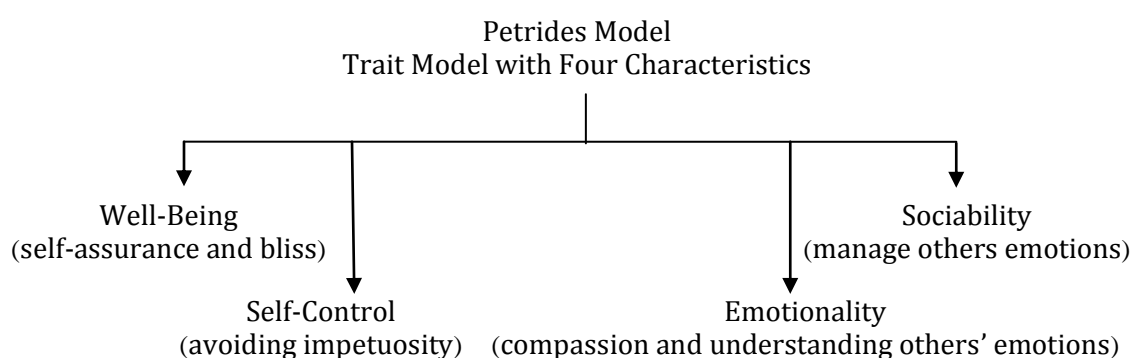
Figure 6. Petrides model of emotional intelligence.

Measuring Emotional Intelligence

Researchers use a wide variety of instruments to measure EI (see Table 2). In

1998, only a few years after Goleman's work increased awareness of EI, researchers of

one report noted that several constructs are used to measure an individual's EI and just as

many alterations of those constructs, but that they lack cohesion in design and use

(Schutte et al., 1998). Theories of EI are still quite diverse 20 years later, indicated by the

extensive selection of accessible measurement tools created and used to assess the

concept (Webb et al., 2013). Even with all of the variations of EI testing methods, four

primary instruments underlay the others: the Emotional and Social Competency

Inventory (ESCI) designed by Goleman and Boyatzis, the Emotional Quotient Inventory

(EQ-i) developed by Bar-On, the Mayer–Salovey–Caruso Emotional Intelligence Test

(MSCEIT), and the Trait Emotional Intelligence Questionnaire (TEIQue), which is based

on the Petrides trait model (Cherniss, 2010). Each instrument has a different use and

evaluation method, as well as limitations and issues. One problem with mixed-model EI

tests and particularly self-report measures is that they can be distorted and falsified,

which can lead to higher scores and a misrepresentation of data (Lievens, Klehe, &

Libbrecht, 2011). The EQ-i and TEIQue are self-report appraisals, the MSCEIT is an

ability-based assessment, and the ESCI is a multirater tool (Cherniss, 2010).

Table 2

EI Evaluation Instruments

Name	Developer	Type	Number of questions	Reliability (Cronbach's alpha)
ESCI	Goleman & Boyatzis	360°	72 (1–5 Likert)	Average of .79 (.74–.89)
EQ-i	Bar-On	Self	133 (1–5 Likert)	Average of .89 (.69–.94)
MSCEIT	Mayer, Salovey, & Caruso	Exam	141 (varied	r value of .93 for expert; r value of .91 for consensus
TEIQue	Petrides	Self	153 (1–7 Likert)	Global score of .96
WLEIS	Wong & Law	Self	16 (1–7 Likert)	Average of .84 (.70–.92)

Note. ESCI = Emotional and Social Competency Inventory; EQ-i -= Emotional Quotient Inventory; MSCEIT = Mayer–Salovey–Caruso Emotional Intelligence Test; TEIQue = Trait Emotional Intelligence Questionnaire = WLEIS = Wong and Law Emotional Intelligence Scale.

Emotional and Social Competency Inventory. The ESCI is an adaptation of the

original instrument, the Emotional Competence Inventory, designed by Goleman and

Boyatzis in 1999 (Segon & Booth, 2015). The ESCI incorporates the components of EI

and social competencies (Boyatzis, Good, & Massa, 2012). EI competence comprises

emotional self-awareness and self-management, which includes control of individual emotions, flexibility, optimistic attitude, and focus on accomplishment. Social competence includes social consciousness (empathy and group emotional awareness) and a relationship-management component that contains five subcompetencies: inspirational leadership, mentoring abilities, persuasiveness, the ability to resolve controversy, and the ability to build and work on a team (Nath, 2013).

The Hay Group manages the ESCI. The instrument is available online and Hay Group personnel manage the test and results; alternatively, researchers can gain accreditation to manage the test by participating in a 2-day training program and meeting a rigid set of professional criteria prior to seeking accreditation. The test is a 360-degree evaluation, indicating peers, supervisors, customers and subordinates evaluate participants. The instrument's self-awareness section has a Cronbach's alpha of .87, the self-management section has a Cronbach's Alpha of .97, the social awareness section has a Cronbach's Alpha of .91, and relationship management has a Cronbach's alpha of .97 (Rodrigues & Madgaonkar, 2013). The test uses a Likert-type scale with values ranging from 1 to 5 to answer a total of 72 questions and allows participants to select a response of "don't know," which does not factor in the evaluation (Galleno & Liscano, 2013).

Emotional Quotient Inventory. The EQ-i is a self-report instrument designed to evaluate the emotional and social intelligence (defined as EQ) of an individual over the age of 17. The EQ-i contains 15 subscale scores that cover five major areas or competencies: intrapersonal, interpersonal, stress management, adaptability, and general mood (Stanimirovic & Hanrahan, 2012). The intrapersonal scale determines an individual's understanding of personal emotions as well as the person's drive to achieve

personal objectives and reach one's individual potential. The interpersonal scale

evaluates individuals' understanding of the emotions of others, their understanding of

group dynamics, and their ability to establish and maintain relationships. The stress-

management area evaluates a person's ability to manage and control emotions.

Adaptability competency focuses on modifying individual emotions to new

circumstances and solving personal difficulties. The general-mood scale evaluates

hopefulness and pleasure with oneself and overall satisfaction with life (Bar-On, 2010).

The EQ-i composes 133 questions that use a 5-point Likert-type scale (Bar-On,

2012). The test takes about a half hour to complete and was designed for people with at

least a sixth-grade reading ability (Muyia & Kacirek, 2009). In a 1999 study to determine

the validity of the EQ-i, Dawda and Hart established its total Cronbach's alpha at .96 for

men and for women with variability across the subscales ranging from a low of .74 for

men and .69 for women to highs of .93 for men and .94 for women (as cited in

Stanimirovic & Hanrahan, 2012). Another study determined the Cronbach's alpha for

posttest scores at .89 for the EQ-i (Muyia & Kacirek, 2009). Bar-On (2012) designed the

instrument to provide an overall EQ assessment with a mean score of 100 with computer-

produced grades. The test is available online or in written form, managed by Multi-

Health Systems, and requires certification for use.

Mayer–Salovey–Caruso Emotional Intelligence Test. Mayer et al. (2004)

designed the MSCEIT to measure EI while separating extraneous variables that align

with the *Big Five* personality traits: openness, conscientiousness, extroversion,

agreeableness, and neuroticism. The instrument measures EI abilities without relying on

biased answers from participants (Choi & Kluemper, 2012). The test evaluates *the most*

correct answer to questions about pictures of faces exhibiting emotions, emotional

situations, emotional correlations, and emotional scenarios (Curci, Lanciano, Soleti,

Zammuner, & Salovey, 2013). Two methodologies determine correctness: consensus of

the results from previous test takers and answers provided by 21 experts in the field of

emotion research and members of the International Society for Research on Emotions

(Caruso, 2016). The test focuses on the four branches of the Mayer–Salovey–Caruso

model: managing emotions, comprehending one's emotions and those of others, using

emotions to cause contemplation, and appreciating emotional expression (Mayer et al.,

2004).

The test consists of 141 questions or pictures and takes about 45 minutes to

complete. Scores discern scores for overall EI, the two areas of experiential and strategic,

the four branches of the Mayer–Salovey–Caruso model, and the eight sections that test

for the four branches (Chew, Zain, & Hassan, 2013). The test requires certification

available in book form, or Caruso (one of the creators of the MSCEIT) personally

provides training at the location of the person/group to be certified (Caruso, 2016).

Results are generalized and similar to a standard IQ test, with a mean score structured

around 100 with an average score ranging from 84 to 116 (Maul, 2012). In a recent

reevaluation of the reliability of the MSCEIT, Mayer, Salovey, and Caruso (2012)

provided information on the reliability of the MSCEIT rather than validity, and the values

were $r = .93$ for consensus scoring and $r = .91$ for expert scoring. In a study that used

MSCEIT scores from 183 medical students, the Cronbach's alpha was .79 (Brannick,

Wahi, & Goldin, 2011). The results reported for the MSCEIT are extensive and provide

detailed information on each of the 15 scales, but data are provided to the test

administrator to follow American Psychological Association guidelines. As Caruso

(2014, p. 1) wrote, "It may therefore be best to describe general levels for some test-

takers rather than the exact percentile in which the person has scored."

Trait Emotional Intelligence Questionnaire. Petrides (2010) described the

TEIQue as the only test that accounts for the intrinsic bias that exists in emotional events.

The TEIQue is a self-report-style test that measures four main components: well-being,

sociability, self-control, and emotionality (Cherniss, 2010). Self-report questionnaires

determine what participants think about themselves: "Trait EI is a constellation of

emotion-related self-perceptions and dispositions (e.g., emotion perception, emotion

management, empathy, impulsivity) assessed through self-report questionnaires"

(Petrides & Furman, 2006, p. 554). Petrides et al. (2007) subdivided the four primary

components into the 15 facets of adaptability, assertiveness, relationships, social

awareness, and stress management. Scores from the 15 facets can predict actions,

outlooks, and accomplishment (Petrides, Pita et al., 2007).

Two basic versions of the TEIQue are an extended version that consists of 153

questions and a short version that has 30 questions. Results from both forms provide an

overall or global EI score as well as scores for the four primary components and the 15

facets (Siegling, Nielsen, & Petrides, 2014). The Cronbach's alpha for the Global Trait EI

score, determined by a study conducted by Laborde, Dosseville, Guillén, and Chávez

(2014) using the long version of the TEIQue was .90; the individual facets ranged from a

high of .85 for trait happiness to a low of .60 for trait optimism and assertiveness. A study

conducted by Petrides and Furman (2006) using the short form of the TEIQue determined

the Cronbach's alpha separately for men and women: values were .84 and .89,

respectively. The TEIQue is available online free for research or academic uses and across a range of cultures and languages from the London Psychometric Laboratory at University College London (McKinley et al., 2014).

Wong and Law Emotional Intelligence Scale. Wong and Law (2002) designed the WLEIS to study EI related to the workplace, specifically as it associates with leadership and management. The authors noted, "[the] lack of a psychometrically sound yet practically short EI measure for leadership and management research" (Wong & Law, 2002, p. 268). Based on the Mayer–Salovey model, the WLEIS contains the four dimensions: self-emotion appraisal, others' emotion appraisal, regulation of emotion, and uses of emotion (Wong & Law, 2002). The WLEIS is a self-report instrument and uses 16 questions, four in each dimension, to evaluate EI. The limited number of questions significantly reduces the time required to complete the survey. Although the scale is concise, results obtained using the WLEIS compare favorably with the EQ-i, but the WLEIS has the added advantage of better predicting life satisfaction (Song et al., 2010).

The WLEIS is reliable with Cronbach's alphas of .92 for the entire scale, .84 for self-emotion appraisal, .92 for other's emotion appraisal, .70 for regulation of emotion, and .90 for use of emotion (Pan et al., 2014). Researchers have used the WLEIS to evaluate EI in U.S. military members (Calloway, 2010; Mula, 2013). Libbrecht et al. (2012) conducted a study on the measurement invariance of the WLEIS and how well it holds up across cultures and determined it remains reliable even after being translated. The instrument is free for use for research purposes when researchers request permission from the authors.

Summary. In addition to the five EI measuring instruments listed above, researchers have developed many other instruments and many varieties of major EI tests. Cherniss (2010) identified an additional five varieties of EI measurement tools and noted that researchers can measure each existing model in multiple ways and through multirater versions of some self-report instruments. For example, the EQ 360 as a multirater modification of the EQ-i. The newness of the EI field is one reason for the diversity of measurement instruments, with each model adding to the knowledge base in the study of EI and the refinement of the individual tests with the goal of finding consensus that will lead to more helpful and cost-effective means to evaluate EI in the future (Cherniss, 2010).

In this study, I used the WLEIS as the EI measurement instrument. It is concise and minimized the amount of time participants needed to devote to their responses. The WLEIS is also free for use for educational and research purposes, which helps to keep costs low for the researcher. The WLEIS is reliable (Carvalho, Guerrero, Chambel, & González-Rico, 2016; Chen, 2014; Pan et al., 2014) and has been used in previous studies as a tool to evaluate the EI of military members (Calloway, 2010; Mula, 2013). Future studies could use a different instrument or even multiple instruments to compare and evaluate whether one instrument is superior to another in evaluating the experiential effect on EI.

Emotional Intelligence Improvement

Associated with the increased attention focused on EI is the question of whether an individual's EI can increase through instruction or training. In a study conducted by Nelis et al. (2009), researchers evaluated two groups to obtain baseline EI scores. One

group received 4 weeks of EI training; the second group continued with their lives

without instruction in EI. At the end of 4 weeks and again after 6 months, Nelis et al.

measured both groups. Control-group EI scores were unchanged over the course of 6

months. The group that received training improved significantly after the 4 weeks of

training and further improved slightly after the training, during the 5 months of receiving

no additional training. As Nelis et al. (2009) noted, "the changes were not only evident on

[sic] the short-term but persistent on [sic] the long-term" (p. 40).

Turner and Lloyd-Walker (2008) researched EI training and effects on individuals

in an organization in the defense industry. The researchers used a pretest–posttest design

with active and control groups to evaluate whether EI training could improve EI scores

and if increases would improve job satisfaction and ultimately project accomplishment

(Turner & Lloyd-Walker, 2008). The EI training initially consisted of general

information on EI, then incorporated conversations about the EI core competencies of

emotional self-awareness, emotional self-control, empathy, and fundamental group

communication abilities; last, researchers employed exercises that used emotional

situations in which participants could employ EI skills. The EI evaluation used the

Emotional Competence Inventory with self-report and peer-rated assessments. The EI

scores of those receiving EI training significantly improved, and participants with

bachelor's degrees improved most, by 10%. Turner and Lloyd-Walker also found that

peer ratings remained stable following the training. The researchers concluded that EI

training has a positive influence on job satisfaction, performance, and overall EI scores.

This is important to this current study because military members receive a variety of

trainings in EI prior to deployment, and this training would have a positive effect on the EI scores of veterans.

In another study undertaken to evaluate the effects of EI training on EI scores, McEnrue et al. (2009) involved business students who were employed full time to determine whether three individual characteristics (openness to experience, self-efficacy, and receptivity to feedback) predicted improvements in individual's EI scores. McEnrue et al. administered the Emotional Intelligence Self-Description Inventory prior to undertaking intensive training designed to increase participants' knowledge of the four dimensions of the Mayer–Salovey–Caruso EI model and to improve on two of the 16 components of the model. After 11 weeks of training, researchers again evaluated participants using the Emotional Intelligence Self-Description Inventory. The characteristic receptivity to feedback aligned with the ability to improve EI scores whereas the other two characteristics, openness to experience and self-efficacy, were not predictors. The authors noted, "This finding suggests that an individual's predisposition to seek and utilize feedback is an important factor when considering which individuals are likely to benefit from EI training or other leadership development programming" (McEnrue et al., 2009, p. 165). This study by McEnrue et al. also shows that EI can improve with training.

In another investigation to assess the effectiveness of EI training, Grant (2007) developed a research project to determine whether the coaching abilities and EI scores of 23 postgraduate students could improve with training using either a 13-week course or a 2-day training session. The researcher designed the content of both courses to enhance the coaching approaches as students interacted with a goal-focused organization. The 2-

day sessions were similar to the 13-week course but condensed and did not allow for repetition. Grant determined that the 2-day sessions moderately improved the coaching skills of participants but their EI scores did not improve. For the 13-week course, Grant ascertained that the coaching skills and the EI scores significantly improved and established that although EI scores can improve, a long-term training program is necessary to achieve this result. Grant also noted that training programs should not only rest on coaching theory but also focus on actual concerns faced by organization members being trained. EI can improve and it is important to focus the training toward the goals of the institution (Grant, 2007).

In the only study aimed at evaluating experience and EI, Roy and Chaturvedi (2011) worked to determine whether job experience affected an individual's EI levels. The researchers determined that when a job has a high emotional component, people focus that emotion and use it to invigorate themselves toward mission accomplishment. People with more emotional experiences are more able to adapt to variations, are more resourceful, and are more appreciative of the emotions of others and their effect on situational change. People with more emotionally related job experience conduct themselves in a manner considered more judicious for the situation and job at hand (Roy & Chaturvedi, 2011).

Opposition to Emotional Intelligence

Several contingents argued that EI is not a valid construct or is unworthy of research, ranging from a lack of consensus on the definition to whether a relationship exists between EI and job performance and whether measures to test EI are valid. One critical issue related to the study of EI is the definition of EI and whether it should be

studied as *trait* EI, which has a foundation in personality, or as *ability*-based EI (Zeidner et al., 2012). Proponents of EI specifically noted the link between EI and job performance (Brackett et al., 2011; Farh, Seo, & Tesluk, 2012) whereas others insisted that no link exists (Joseph & Newman, 2010). Another problem with EI research is the evaluation techniques used and the validity associated with the instruments used to measure an individual's EI.

Trait versus ability. Mayer et al. (2004) determined that EI is an ability, whereas others contended EI is a trait related to personality (Goleman, 1998; Petrides, 2010). Zeidner et al. (2012) noted that one problem in the study of EI is the uncertainty of its definition. Because emotions and emotional encounters are subjective, it is difficult to assess the ability aspect of EI but not the trait aspect, due to the nature of the individual perspective in reporting. Similarly, Fredrickson, Petrides, and Simmonds (2012) stated that EI evaluations that concentrate on ability are comparable to traditional intelligence assessments whereas trait EI depends on the participant's view and understanding of individualized emotions. The Fredrickson et al. assertion means the researcher must choose between ability-based EI and trait-based EI prior to engaging in inquiry. Di Fabio and Saklofske (2014) noted that ability-based EI relies on cognitive aptitude and should be evaluated with *maximum-performance* tests, whereas trait-based EI comprises *affect-related* activities and individual discernment and is most accurately evaluated by self-report assessments. Differing views on EI lead to confusion and difficulty in defining the concept. Locke and Eysenck each argued that because EI covers a variety of traits and concepts, it is too all encompassing to have scientific unity (as cited in Kaufman, Kaufman, & Plucker, 2013).

Emotional intelligence and job performance. Much of the research on EI was conducted to link higher scores on EI tests with higher job performance. Antonakis, Ashkanasy, and Dasborough refuted the premise that EI can predict workplace performance and stated, "EI failed to predict variance in performance measures beyond the variance predicted by IQ" (2009, p. 248). They declared IQ the preeminent forecaster of job performance. This is contrary to Goleman's (1998) assertion that EI is more important than IQ or technical expertise at prophesying worker performance. Using meta-analytic data, Joseph and Newman (2010) also contested the assertion of the capacity for EI to foretell performance at work. They wrote, "At worst, measures of ability models of EI show only a modicum of incremental validity over cognitive ability and personality traits, again providing evidence against Goleman's (1998) expansive claims" (Joseph & Newman, 2010, p. 67). Matthews et al. (2004) proposed that one factor that could contribute to false indications linking high EI scores with job success is the likelihood that performance evaluations of those with high EI may be prejudiced because those individuals are more likable and, therefore, are scored higher by their supervisors.

Emotional intelligence measurement instruments. One complaint of EI research critics is the lack of research into the validity of the instruments used to measure EI (Lee & Kwak, 2012). Another criticism is the number of different EI tests that measure different factors related to EI (Matthews et al., 2004). In one study alone, researchers identified 10 different EI measurement scales commonly used by EI researchers and five of the 10 instruments were based on the Mayer–Salovey ability-based EI model (Matthews, Zeidner, & Roberts, 2012). In contrast, some researchers criticized the lack of alternative instruments available to measure ability-based EI apart

from the MSCEIT (Fiori & Antonakis, 2011; Fiori et al., 2014). Chopra and Kanji (2010) contended that models that attempt to measure EI that are trait-based suffer from validity issues because they rely on self-reporting techniques that are subjective and can be falsified. This viewpoint is important to this study because the WLEIS relies on self-reporting and, even though participants' answers will be anonymous, they are susceptible to being falsified.

Leadership

Many veterans have served in leadership positions before, during, and after their deployments and seek leadership positions in their search for employment after their service is complete. Organizations focus on hiring leaders who have already displayed abilities that are congruent with the positions they are attempting to fill. The military has many leadership-training programs designed to train military members incrementally for each new leadership position. The Army, for example, has five different courses for noncommissioned soldiers that range from 4 weeks to 10 months in length to prepare soldiers leading groups ranging from teams to battalions (U.S. Army, 2014). In the following section, I review leadership theory with emphasis on transactional leadership, laissez-faire leadership, transformational leadership, and EI and transformational leadership. A timeline with leadership theory appears in Table 3.

Table 3

Modern Leadership Theories

Theory	Developed	Leadership styles
Trait (Great Man) Theory	1870s	Heroic
Group theory	1940s	Laissez-fair, authoritarian, and democratic
Contingency theory	1970s	Situational
Path-goal theory	1970s	Transactional
Multifactor leadership theory	1980s	Transformational, transactional, and laissez-faire

Modern Leadership Theory

Modern leadership theory traces to Galton's book, *Hereditary Genius*, written in 1869. Galton's study was the first empirical study on leadership, contending that people are born with leadership traits and only exceptional people are capable of being leaders (Zaccaro, 2012). Galton termed this model trait-leadership theory and studies on trait theory concentrated on an individual's personal attributes, including physical attributes (Lu, Shen, & Williams, 2014). Carlyle was an advocate of trait theory and presented the Great Man theory in 1907, positing that all leaders have a set of traits that include determination, self-assurance, honor, ambition, and enthusiasm to succeed (Hoffman, Woehr, Maldagen-Youngjohn, & Lyons, 2011). Trait-theory scholars thought leadership was devoid of dispute and the situation did not matter, which leads to thinking only heroic men can make decisions that bring about great change (Vroom & Jago, 2007).

Trait theory was prevalent until Lewin's study in 1938, which established three different leadership styles; autocratic, democratic, and laissez-faire (Burnes & Cooke, 2013). Lewin proposed that to comprehend the behavior of a person, one must reflect on the circumstances of the situation (Burnes & Cooke, 2013). In 1967, Fiedler wrote *A*

Theory of Leadership Effectiveness and developed the contingency-theory model of leadership. The contingency theory proposed that leaders have fixed styles of leadership and should be matched to situations that can take advantage of their leadership characteristics (as cited in Dinh et al., 2014). Fiedler maintained that two types of leaders exist: those who are relationship-motivated and those who are task-motivated. Fiedler examined how these two types of leaders are effective in eight different situations, finding that each type of leader scores high in four different areas, and concluding that leaders should be assigned based on the areas in which they score high (Vroom & Jago, 2007).

Leadership theory advanced with House and Mitchell's work on path–goal theory in 1974, which argued that leaders have the ability to change their leadership styles to correspond to the circumstances at hand to produce higher performance from the workforce (as cited in Hernandez, Eberly, Avolio, & Johnson, 2011). This construct was similar to Fiedler's work in that one must consider situational context, but differed because each leader can choose the style of leadership to present, based on the situation (due to fixed leadership styles) dictating the leader's style (Vroom & Jago, 2007). The leader can also evaluate workers' thoughts and considerations in determining the leadership style to use (Vroom & Jago, 2007). The overall objective of path–goal theory was to improve the satisfaction of workers and amplify their drive toward higher accomplishments (Northouse, 2012).

Burns studied and characterized contemporary leadership styles in 1978 (as cited in Warrick, 2011). Researchers who studied accomplishment and achievement showed that workers are attracted to transformational leaders (Hernandez et al., 2011). Bass was a

contemporary of Burns and expanded on Burns's work with a 1985 book, *Leadership and Performance Beyond Expectation*, presenting multifactor-leadership theory (Hargis, Watt, & Piotrowski, 2011). In addition to adding Lewin's laissez-fair style leadership to multifactor-leadership theory, Bass researched the effect of transformational leadership and expounded on its components (Warrick, 2011). Bass also included an emotional factor to transformational leadership, suggesting that enthusiastic leaders who motivate their followers provide emotional stimulation and increase the amount of satisfaction followers have in their work (Hernandez et al., 2011).

Transactional leadership. Three facets comprise transactional leadership: contingent reward, active management by exception, and passive management by exception (Harms & Credé, 2010). Contingent reward is the traditional form of transactional leadership composed of the leader establishing unambiguous objectives and outlining what the rewards will be if they are met (Rezvani, Khosravi, Subasinghage, & Perera, 2012). These rewards do not need to be pecuniary but can range from time off to praise or to awards. Active management by exception is characterized by the leader deciding on set punishments for set failures, the leader actively seeking out failures, and the leader not participating in the activity (Chaudhry & Husnain, 2012). In passive management by exception, the leader becomes involved only if the problem is brought to their attention and they tend to avert any change that is not deemed essential (Groves & LaRocca, 2011). Leadership by exception creates conditions in which the follower focuses only on preserving the current situation and on trying to become better only at what they do. Leadership by exception aligns with not encouraging progress or problem-solving (Chaudhry & Husnain, 2012).

Laissez-faire leadership. Laissez-faire leadership is considered to be the most dysfunctional of all leadership styles because the leader is completely disengaged and offers no guidance or backing (Skogstad, Hetland, Glasø, & Einarsen, 2014). This style of leadership produces the effect of no activities taking place in the face of issues or problems (Harms & Credé, 2010). Laissez-faire leadership has reportedly resulted in the organization producing minimal productivity of diminished quality (Schyns & Schilling, 2013). Laissez-faire leadership is the least active form of leadership with leaders according their groups complete freedom (Chaudhry & Husnain, 2012). Although laissez-faire leadership is destructive in most cases, it can be successful in situations where followers are highly skilled, expert, and highly motivated (Amanchukwu, Stanley, & Ololube, 2015).

Transformational leadership. Transformational leadership is often referenced as motivational leadership such that the leader inspires workforce members to improve themselves and the organization for the betterment of all and not just for personal gain (Warrick, 2011). Leaders who practice transformational techniques develop subordinate accomplishment through a collective visualization of the future (Leigh, 2012). Transformational leadership rests on trust and the knowledge that the leader is helping to build subordinates and ultimately create new leaders (Braun, Peus, Weisweiler, & Frey, 2013). By creating a culture that empowers followers, transformational leaders can spark creativity in subordinates that they would not normally display without the support of the leader (Wang, Oh, Courtright, & Colbert, 2011). Transformational leadership lays a solid foundation for relationship building between the leader and follower and, as a result, the follower's motivation often exceeds expectations (Bass & Riggio, 2006). Bass and

Riggio (2006) described the four elements of transformational leadership as idealized influence, inspirational motivation, individualized consideration, and intellectual stimulation. Table 4 illustrates a comparison of transformational- and transactional-leadership styles.

Table 4

Comparison of Transactional and Transformational Leadership

Transactional leadership	Transformational leadership
Contingent reward - Identifies expectations - Applies clearly defined rewards and punishments	Idealized influence - Displays confidence - Behaves morally and demands the same of others - Creates a climate of commitment
Active management by exception - Actively looks for mistakes - Punishes all mistakes	Individual consideration - Mentors and trains subordinates - Respects workers individually - Understands workers' desires, skills, and abilities
Passive management by exception - Is activated only when something fails - Avoids all unnecessary change	Inspirational motivation - Provides inspired vision - Maintains a positive attitude and effuses enthusiasm - Maintains standards and provides support
	Individual stimulation - Inspires creativity - Questions old techniques - Champions positive change

1. Idealized influence—Leaders are admired by subordinates because they show confidence and are assured in their actions. They stress the importance of behaving morally and inspire trust and allegiance in the workforce. Leaders create a common interest to achieve goals and foster a climate of commitment in the organization.

2. Inspirational motivation—Leaders provide the workforce with a picture of what can be achieved. They are positive and speak enthusiastically of things

to come. They enforce tough requirements while offering support and guidance for tasks at hand.

3. Individualized consideration—Leaders mentor and train subordinates to be tomorrow's leaders. They treat each person as an individual and know each of their subordinates' desires, skills, and capabilities.

4. Intellectual stimulation—Leaders foster an air of creativity and question the status quo. They seek the thoughts and proposals of the workforce and champion positive change.

Emotional Intelligence and Transformational Leadership

Goleman associated EI with positive outcomes for leaders and their organization, adding that leaders who exhibit EI characteristics are among the best corporate leaders (Goleman, 1998). These EI skills include emotional awareness, willingness to accept change, and demonstrations of respect for others. One critical skill required of leaders is making decisions; leaders who are aware of their emotions and the emotions of others are better equipped to make quality decisions (Hess & Bacigalupo, 2011). In the rapidly changing environment that exists today due to technological advancements and an increasingly global economy, change is constant; leaders must be able to adapt to change (Goleman, 1998). Mittal and Sindhu (2012) found that leaders who have high levels of EI are better able to adapt to change and adopt change as well as influence their subordinates to do the same. In their meta-analysis of the relationship between EI and leadership styles, Harms and Credé wrote, "EI was positively related to the various dimensions of transformational leadership and contingent reward behaviors but was either unrelated or

negatively related to management-by-exception or laissez-faire leadership behavior"
(2010, p. 13).

In a study of EI and transformational leadership of nonprofit executives, Meredith
(2008) found a convincing connection linking EI and transformational leadership.
Leaders favored three of the four components of transformational leadership: idealized
influence, individual consideration, and inspirational motivation. Transformational
leaders are skilled in the EI qualities of self-awareness, social management, and
relationship management (Warrick, 2011). Empathy is another critical component of EI
that positively aligns with transformational leadership. Leaders who demonstrate high
levels of empathy are more prone to use transformational-leadership techniques and more
likely to value subordinates as individuals (individual consideration), expending greater
effort on relationship management (Harms & Credé, 2010). Authors of unrelated studies
determined that a positive relationship exists between EI and leadership success and,
therefore, overall accomplishment in organizations (Cherniss, 2010; Côté & Hideg,
2011). In addition to the success of leaders, subordinates of leaders who score high in EI
are more likely to be successful (Beverly, Williams, & Kitterlin, 2012). Relationships
between EI and transformational leadership indicate that if an individual has a high EI
score, that individual may be a viable candidate for a leadership position.

Emotional Intelligence and Stress

EI also relates to stress and the ability to relate to stress. Workplace stress lowers
productivity and potentially causes valued employees to seek other employment (Rahim,
2010). Employees placed in stressful environments react with either adaptive (positive) or
maladaptive (negative) approaches in efforts to relieve stress (Petrides, Pérez-González,

& Furnham, 2007). Relatedly, employees interacting with other employees or customers for an extended period in the workplace often suffer from emotional exhaustion and corporeal damage (Grandey, 2015). Employees feel a continuous need to manage their emotions and display those emotions in strict accord with organizational directives, a phenomenon known as "emotional labor" that is a considerable source of workplace stress (Wagner, Barnes, & Scott, 2014). Employees who are subjected to working long hours or mandatory travel or who are often overburdened experience severe stress (Rahim, 2010).

EI can moderate stress and improve the workplace (Petrides, Pérez-González, et al., 2007). EI skills demonstrated by leaders can acutely influence the stress of subordinates and thereby increase performance and employee satisfaction (Rahim, 2010). During stressful situations, leaders are more likely to draw on their EI skills and less on their analytical abilities. Leaders with high EI scores are more prone to address the issue at hand and return to normal operations (Antonakis et al., 2009). Teaching leaders the skill of being more versatile when confronted with stressful situations may be more important than teaching other aspects of EI (Cherniss, 2010). People who score high in EI have higher levels of empathy and can manage their emotions and the emotions of others so they can generate a more beneficial environment for their customers, employees, and coworkers (Guy & Lee, 2015). Individuals high in EI are more likely to adopt an adaptive style (which corresponds to actively changing the stressful situation) when managing stress and stressful situations than those with lower EI scores, who are more likely to adopt a maladaptive approach (which aligns with taking a dysfunctional approach to managing the stress; Petrides, Pérez-González et al., 2007). Stress management with EI is

an important component of this study because stress management is critical to the success of military members who are deployed in combat or on a humanitarian mission.

Military Operations

Military members who have been notified of an impending deployment to a hostile environment for combat duty or for a humanitarian mission face a variety of emotional and psychological issues. Many deploying military members have families, a condition that can amplify stressors for the deploying member (Sher, 2009). The soldier and family members experience fear and anxiety about household issues and finances, infidelity, safety and security of children, and the potential for harm to the service member (Pincus et al., 2001). Service members must confront severe stressors associated with their individual welfare, the welfare of their cocombatants, the welfare of their subordinates, and the consideration that they may have to harm or kill another human in the course of their duties (Stanley, Schaldach, Kiyonaga, & Jha, 2011). Careercast.com listed jobs in the military as the most stressful jobs in 2013, mainly because service members are held accountable for the lives of others (Kensing, 2014).

Predeployment

Once a service member receives notification of impending operations, predeployment functions begin. The predeployment phase of combat or humanitarian missions marks the beginning of an emotional cycle for not only deploying military members but also for their families (Pincus et al., 2001). Sher (2009, p. 217) noted, "Frequently predeployment stress is related to anticipatory anxiety; [and] that feelings of loneliness, guilt, and abandonment can also be present as departure approaches." Service members begin a cycle of intense training to prepare them for the impending mission and

to build unit cohesion (van't Wout & Van Dyk, 2015). During this period, military members begin to become more closely emotionally attached to their units and more detached from their families (Pincus et al., 2001). Accordingly, the U.S. military has started offering training to service and family members to strengthen their emotional resilience and better prepare them for the hardships to come (Sher, 2009). One such training program is mental skills training, a program adapted from sports psychology and designed for family members (Harms et al., 2013). Mental skills training helps improve the self-confidence family members need to maintain family cohesion, and to manage the functions that the deploying family member may have addressed prior to deployment notification (Harms et al., 2013).

Although many in the military view emotional expression negatively, others say leaders who are able to communicate and manage their emotions are more successful leaders (Harms et al., 2013). The U.S. Army has recognized that EI is critical to unit accomplishment and solidity, and has undertaken steps to improve soldiers' emotional well-being and ability to understand the emotions of others in their unit and civilians they encounter in executing their duties (Sewell, 2011). In addition, EI serves to increase unit cohesion, enthusiasm, and the development of subordinates (Owen, 2013). Mindfulness-based mind-fitness training is a program presented to service members in the predeployment phase. It has been designed to improve their EI and thereby enhance unit and individual success during military deployments (Heydenfeldt, Herkenhoff, & Coe, 2011). In a study of mindfulness-based mind-fitness training, Stanley, Schaldach, Kiyonaga, and Jha noted, "providing training to help military personnel manage stress before deployment may help them function more effectively while deployed and perhaps

ameliorate the long-term health effects of the deployment itself" (2011, p. 567). Indeed, predeployment training programs enhance the emotional well-being of deploying service members, affecting a member's psychological state and preparing the member to respond to combat-related emotional situations. Without such programs, members could be left ineffectual and unable to effectively complete their missions (D. Johnson et al., 2014). In addition to helping soldiers cope with combat-related emotional events, predeployment training aimed at emotional resiliency could also continue to help soldiers after their deployments are complete (Love, 2011).

The military has recognized that stress can be harmful to the emotional well-being of deployed military members (Rizzo et al., 2011). Several programs help service members cope with stress during predeployment and deployed operations. Predeployment-stress-inoculation training is one program initiated to assist military personnel in managing the emotional pressures they will experience in combat. The program applies stress-control and self-awareness training to help military members learn to manage stress (Hourani et al., 2011). Another predeployment program designed to help military members manage stress is the stress resilience in virtual environments program. This program uses virtual reality to immerse service members in realistic combat scenarios to increase their abilities to manage their emotions during warfare (Rizzo et al., 2011).

Combat

Armed combat is one of the most emotionally demanding predicaments a person can encounter, regardless of the training conducted beforehand (Rizzo et al., 2011). In addition to coping with the possibility of death or injury, causing death or injury, or being

responsible for others who may be injured or killed (Bollinger, 2013), military personnel in combat must be prepared to switch from combat-related activities to peaceful exchanges with indigenous civilians (Culhane, Reid, Crepeau, & McDonald, 2012). Because many armed conflicts recently conducted involve counterinsurgency operations, military personnel must gain and maintain the trust of the local population, which requires communication, relationship building, and an understanding of emotions (Laurence, 2011). To maintain the ability to reason in conflict situations, service members must set aside their emotions to some degree while maintaining an understanding of the emotions of their allies and counterparts, civilian and combatant (Blanchette & Campbell, 2012). To lessen the effects of negative emotional situations and the stress of combat, and to improve the emotional well-being and performance of the unit and its personnel, service members and their leaders need to engage their peers and subordinates in an effort to identify personnel who are at risk emotionally (Harms et al., 2013).

Combat actions are rife with trepidation and rage. Military members in combat situations must attune to fear and anger and the facial expressions that manifest these emotions. In one study, combat veterans were better able than noncombat veterans to more precisely identify facial expressions that relate to fear or anger (Anaki, Brezniak, & Shalom, 2012). Foreboding and fury can lead to thoughts and actions that can negatively affect the outcome of battle. Military members who can actively reassess their emotions are more likely to look toward a more positive future and to have hope for a positive outcome of the conflict at hand (Halperin & Gross, 2011). The U.S. Army is shifting toward an innovative style of leader who is intellectually and emotionally flexible

(Bollinger, 2013). Military members who are more likely to engage in emotional regulation are also more likely to render aid to enemy combatants and to take part in providing humanitarian aid to civilians (Anaki et al., 2012): actions that help establish trust with local civilians.

Humanitarian Missions

Humanitarian service conducted by the military implies the use of force to protect civilians and prevent infringements to their basic human rights, as well as to provide humanitarian assistance (Goss, 2013). The military component of humanitarian missions works closely with civilian organizations, mainly from the United Nations, to form what are often referenced as civil–military operations (Goss, 2013). Due to different agendas, it is impracticable that all stakeholders will always have aligned objectives, even though collaboration might exist between and among them (Merminod, Nollet, & Pache, 2014). Due to the separation of chains of command and mission design, the civil group and the military group are often forced to work on similar issues in strikingly different ways, which can lead to added responsibility and increased stress for unit commanders and troops (Heaslip, 2012).

Operations to increase the stability of a region, foster democracy, and improve or defend human rights are political schemes thrust on military units that were not originally trained or configured for these purposes (Meyer, 2013). For example, efforts by coalition forces operating in Iraq and Afghanistan have led to the creation of military *reconstruction-teams* that act to fill the void where local governments are not strong enough and where nongovernmental organizations do not have the capability to establish *nation building* activities (Keane & Wood, 2016). The teams served partly in

counterinsurgency operations and had tactical and strategic missions to improve the safety of the region, the safety of personnel; and to win the hearts and minds of the local population (Meyer, 2013).

Soldiers who are on humanitarian missions are required to interact with the local population and navigate differences in customs, verbal communication, nonverbal communication, attitudes, and ways of life (Wolfe & Arrow, 2013). Their exhibition of nonverbal emotional displays sometimes profoundly influence others (Côté & Hideg, 2011). To successfully traverse these cultural dissimilarities, military members need to have and apply appropriate social and emotional skills (Laurence, 2011). The authors of one study found that it is not merely the type of emotions that military personnel experience in conflict situations that influence their reactions, but also the manner in which they cope with their emotions (Halperin & Gross, 2011). Because of their ability to cope with emotions, emotionally intelligent service members are better equipped to manage crises that arise during humanitarian missions than are service members who are not emotionally intelligent.

Although the physical environment can be challenging for military members during humanitarian missions, it is the human experience and emotions that have more influence on circumstances; and acknowledging and accepting those emotions is an essential skill for members of the military engaged in humanitarian operations (de Graaff, Schut, Verweij, Vermetten, & Giebels, 2016). Abrahams noted that Special Forces units, which are often activated for humanitarian missions, use EI as a criterion for selection into their ranks (as cited in Arnatt & Beyerlein, 2014). Wolfe and Arrow found that interviewed military members felt "that empathy (understanding other people's feelings),

interpersonal skills (attitude and communication skills), mental models (perspective taking), and willingness to engage/openness to experience were important for mission success in cross-cultural, deployed interactions" (2013, p. 460).

Summary and Conclusions

The scientific study of EI is still in its infancy, but the concept, in the abstract, has existed for millennia. EI has roots that date to Socrates and the Greek philosophers (Chopra & Kanji, 2010). Meisler and Vigoda-Gadot (2014) credited Salovey and Caruso with originating the term *emotional intelligence,* although Payne used the phrase in the title of a 1985 doctoral dissertation, a study about relating to emotions. The field is divided by those who believe EI is an innate ability, those who believe it is a skill that can improve, and those who believe it combines natural aptitude and competence that can be taught and learned. The four major models in the domain of EI scholarship are those of Goleman, Mayer-Salovey, Bar-On, and Petrides (Cherniss, 2010).

Researchers have developed a variety of instruments to measure an individual's EI systematically, ranging from self-report tests to 360-degree analyses that include evaluation by peers, subordinates, and supervisors of the individual being tested. EI affects job satisfaction and job performance. Researchers concluded that EI scores can improve through training or with experience. Some contingents in academia believe EI is overrated and should not be an independent area of study. These contingents argue that EI is not a valid construct or is not worthy of research due to a lack of consensus on the definition, whether a relationship exists between EI and job performance, and whether measures to test EI are valid.

Leadership theory has advanced from leadership trait theory (that leaders are born with traits that enable them to lead) to transformational leadership (that leaders inspire workforce members to improve themselves and the organization for the betterment of all). Leaders who score higher in EI are more likely to incorporate the transformational style of leadership, aligned with job satisfaction and job performance, as well as to incorporate mentoring and improving the skills of subordinates. EI skills demonstrated by managers can acutely influence the stress of their subordinates and thereby increase performance and employee satisfaction (Rahim, 2010).

The predeployment phase of combat or humanitarian missions marks the beginning of an emotional cycle not only for deploying military members but also for their families (Pincus et al., 2001). Military personnel deployed in combat face extreme stress and emotional situations. Service members engaged in humanitarian service must endure similar emotional circumstances and must interact with local civilians and humanitarian aid workers who have different emotional behaviors, expressions, and cultural identities. The U.S. military has developed predeployment training programs to help deployed members cope with stress and manage their emotions to improve mission success.

Chapter 3: Research Method

The purpose of this quantitative nonexperimental survey study was to observe, evaluate, and compare the EI scores of military leaders who served in strong emotional deployments with the EI scores of those who did not serve in strong emotional assignments to improve knowledge of how strong emotional experiences affect EI. The results of this study could improve the prospects of some veterans in finding work in the civilian community after their military service is complete. A causal-comparative design permitted EI scores of veterans who have served in emotional situations to be compared with scores of veterans who have not served in these environments to determine whether a significant change in EI levels exists, measured by the WLEIS. I asked military veterans with and without combat or humanitarian mission experience to participate in this study. The research questions were the driving influence for the research strategy and the research method. In this chapter, I describe the methodology for the study.

Research Design and Rationale

Variables

Dependent variable. The scores that U.S. military veterans attained on the WLEIS constituted the dependent variable for this study. The WLEIS is a self-report survey instrument designed to evaluate the EI skills of an individual. I administered the instrument to military leaders with combat experience, humanitarian mission service, and those without either humanitarian mission or combat experience.

Independent variables. Combat and humanitarian mission experience and a combination of combat and humanitarian mission experience composed the three independent variables for this study. I analyzed the independent variables to determine

their effect on the dependent variable: scores from the WLEIS. Four groups emerged, based on the independent variables: one group was composed of those with combat experience, one of those with humanitarian mission experience, a third group of those with both combat and humanitarian mission experience, and a fourth group of military veterans who had neither combat nor humanitarian mission experience.

Moderating variables. Moderating variables are those that affect the tendency and potency of the association of the dependent and independent variables (MacKinnon, Coxe, & Baraldi, 2012). Several moderating variables pertain to this study. The time between the application of the independent variable and the evaluation of the dependent variable was a moderating variable. Some participants recently returned from a deployment whereas others may have had years or even decades between their deployment and administration of the WLEIS. The duration of the deployment that constitutes the independent variables was another moderating variable. I selected a minimum deployment length of 6 months to qualify as an independent variable, but some participants may have experienced deployments of much longer lengths and multiple deployments that totaled more than 6 months. In addition, the severity or intensity of the deployment was another moderating variable. All combat and humanitarian mission deployments vary by magnitude and proportion. I did not evaluate these moderating variables in this study, but they could form the basis for future studies.

Designs Not Chosen

I did not choose a qualitative design because it is inappropriate for testing hypotheses or comparing survey results (Allwood, 2012). Qualitative research is more appropriate for examining the thoughts and perceptions of participants and not for

evaluating numerical data (Gray, 2014). Mixed-methods research is a combination of quantitative and qualitative approaches to research. One reason I did not choose a mixed-method design is that it can suffer from additional validity concerns because of the combination of approaches (Venkatesh, Brown, & Bala, 2013). Another reason I did not select mixed-method research is that it would require access to interview or observe participants, which was not possible for this study.

Because it was not possible to randomly assign participants to groups before implementing the independent variable, I did not select the classical experimental design for this study. Another reason for rejecting the classical experimental design was the inability to employ a pretest to the groups before administering the independent variable. Researchers sometimes employ a quasiexperimental methodology when it is not possible to arbitrarily assign participants to variables in a research project (Handley, Schillinger, & Shiboski, 2011). I did not select a quasiexperimental design due to the requirement to implement a pretest to participants (Connelly, Sackett, & Waters, 2013). The quasiexperiment may be appropriate for future research if a researcher can access military personnel who will be deployed before deployment as well as those who have not been deployed in order to execute a pretest. Furthermore, the quasiexperimental design was unsuitable because I was unable to choose which military leaders were deployed and which were not, and thus I could not assign participants randomly. I did not select the pre-experimental design due to the inability to manage internal and external validity, which leads to an inability to infer causation (Rubin & Babbie, 2013).

Research Design

The framework that informed the investigation of the research questions in this study was the causal process. Causality infers that the independent variable brings about a change in the dependent variable. In a causal relationship, the variables vary together, which means they correlate or associate with each other (Maruyama, & Ryan, 2014). As the level of the independent variable changes, a corresponding change will take place in the dependent variable. In some cases, two or more independent variables will have a causal effect on the dependent variable (Rottman & Hastie, 2014). Each independent variable can affect the dependent variable to varying degrees. It is possible that a synergistic effect would be caused by two independent variables with the overall level of change being higher than the effect of either independent variable applied alone (Rottman & Hastie, 2014). In a causal relationship, the dependent variable does not affect the independent variable, which means the relationship is not cyclical or bidirectional.

It is important for researchers to examine the potential of uncontrollable variables that can have a spurious effect on the dependent variable (von Elm et al., 2014). This examination can help researchers eliminate unintended and unassociated variables that may affect the variables being examined (Rudd, 2012). In this study, the independent variables were combat, humanitarian mission, and a combination of combat and humanitarian mission experience of veterans. The experiences of all three groups may have been affected by the EI training they could have received before deployment and the extreme emotions they went through and came into contact with during the deployment. The dependent variable was veterans' EI scores, measured with the WLEIS.

The causal process is composed of five components. The first component is that dedicated training aimed at improving EI is effective. The second factor in the process is that EI increases as people are exposed to emotional situations. Next, as military personnel prepare for deployment, they receive training designed to improve their understanding of their individual personal emotions, the emotions of other military personnel and civilians, and relationship management. The fourth component occurs during deployments as military leaders gain experience in emotional situations that affect them, their allies, and the civilians they encounter in the execution of their duties. The causal process culminates with military leaders improving their EI skills as a result of the training they receive and their exposure to intense emotional contingencies while deployed on combat and humanitarian missions, compared to military leaders who have not experienced combat or been deployed on humanitarian missions. Thus, the following steps (shown as a three-step process in Figure 1) inform the causal system:

1. Training can improve the EI levels of individuals.

2. Experience can increase the EI levels of individuals.

3. Military leaders are subjected to EI instruction in the predeployment phase of their armed-conflict and humanitarian mission preparation.

4. Military leaders experience extreme emotional situations during their duties on combat and humanitarian missions.

5. Military leaders have elevated EI scores after their deployments are complete, compared to before the predeployment phase of their training.

Study Design

A cross-sectional survey design was the research design selected for this study. The principal motive for choosing this scheme was that the application of the independent variable was not controllable and had previously transpired. This inquiry investigated whether the EI scores of military personnel who have served in combat or on humanitarian missions vary when compared to the EI scores of military leaders who have not served in either capacity. It was not possible to appoint participants to random groups for assignment of the independent variables because the application of the independent variables had already occurred. The members of the no-combat or humanitarian mission experience group did not have the potential to receive the treatment of the independent variable for this study. In addition, I could not control and did not measure confounding variables, which can affect the relationship between the dependent and independent variables (von Elm et al., 2014). It also was not possible to create a sterile environment for this study, again because the independent variables had already been applied. A cross-sectional design allowed participants to contribute to the study in an informal setting, which helped improve the external validity of the research (Maruyama & Ryan, 2014).

Research Questions and Hypotheses

The central question for the study was: Do unemployed U.S. military leaders who have served in either combat or on humanitarian missions possess an untapped resource in their EI skills and abilities that would be of value to civilian employers? Prior researchers found a positive and direct relationship between EI and transformational leadership. Four research questions I evaluated for this study rested on the central research question:

1. What is the relationship between combat experience and EI, as measured by the WLEIS?

   $H_0 1$: No statistically significant relationship exists between military leaders' scores on the WLEIS and their combat experiences.

   $H_a 1$: A statistically significant relationship emerges between military leaders' scores on the WLEIS and their combat experiences.

2. What is the relationship between military humanitarian mission experience and EI, as measured by the WLEIS?

   $H_0 2$: No statistically significant relationship exists between military leaders' scores on the WLEIS and their humanitarian mission experiences.

   $H_a 2$: A statistically significant relationship emerges between military leaders' scores on the WLEIS and their humanitarian mission experiences.

3. What is the relationship between a combination of combat and military humanitarian mission experiences and EI, as measured by the WLEIS?

   $H_0 3$: No statistically significant relationship exists between military leaders' scores on the WLEIS and their combined combat and humanitarian mission experiences.

   $H_a 3$: A statistically significant relationship emerges between military leaders' scores on the WLEIS and their combined combat and humanitarian mission experiences.

4. To what extent does a statistically significant difference exist between the scores military leaders with combat experience achieve on the WLEIS

compared to the scores military leaders with humanitarian mission experience achieve on the WLEIS?

$H_0$4: No statistically significant difference exists between the scores that military leaders with combat experience achieve on the WLEIS compared to the scores that military leaders with humanitarian mission experience achieve on the WLEIS.

H_a4: A statistically significant difference exists between the scores that military leaders with combat experience achieve on the WLEIS compared to the scores that military leaders with humanitarian mission experience achieve on the WLEIS.

Methodology

Population

The population for this study was composed of U.S. military veterans with at least 4 years of military service. The study evaluated the EI of four groups of veterans: veterans with combat experience, veterans with humanitarian mission experience, veterans with combat and humanitarian mission experience, and veterans without combat or humanitarian mission experience. Gathering participants was the first of six research steps depicted in Figure 7.
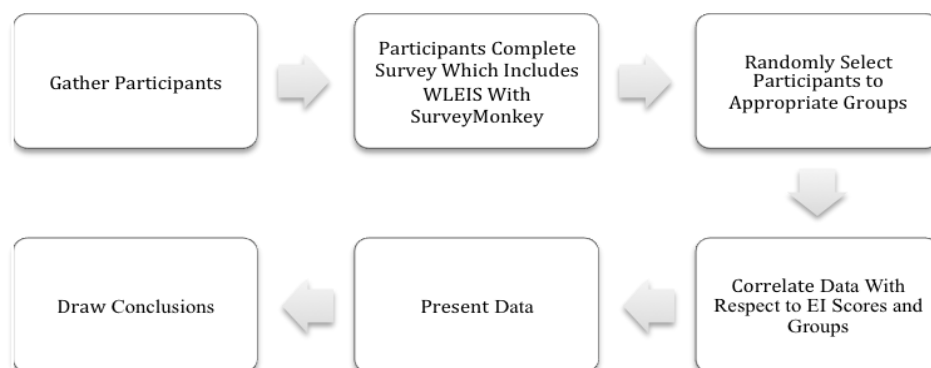
Figure 7. Research steps.

Sampling and Sampling Procedures

I used a multistage stratified design to select participants. A multistage design is one in which the researcher isolates collections of individuals who could yield participants and then randomly chooses participants from those collections (Ye, Beach, Martin, & Senthilselvan, 2015). Researchers use stratified sampling when they want to make certain the sample represents certain characteristics of the overall population to enhance the precision of the researcher's deductions from the results of the study (Maruyama & Ryan, 2014). The racial structure of the U.S. military is 62.53% Caucasian, 11.33% Hispanic, 16.16% African American, 4.53% Asian or Pacific Islander, 1.27% American Indian, and the remaining 4.18% fall into other categories (U.S. Department of Defense, 2012). Women comprise 16.5% of the total U.S. military force (U.S. Department of Defense, 2014). A stratified strategy ensured that this study closely resembled the actual ethnic and gender makeup of the U.S. military while maintaining the randomness of the participants. A sample that is representative of the actual racial and gender composition of the military increased the external validity and

improved the precision of the generalizations made as a result of the data collected in the study.

One technique to determine sample size for the study considers the statistical power, the alpha level, and the effect size (Burkholder, personal communication, April 11, 2013). An acceptable value of statistical power is .80 (Téllez, García, & Corral-Verdugo, 2015), which means that the null hypothesis would be rejected 80% of the time. The alpha level is a determination of the likelihood of drawing an incorrect inference (Burkholder, personal communication, April 11, 2013); this means that a value of .05 leads to a 5% probability of arriving at an incorrect conclusion. Fritz, Morris, and Richler (2012) described effect size as, "All other things being equal, the larger an effect size, the bigger the effect the experimental variable is having and the more important the discovery of its contribution is" (p. 14). The effect size for this study was determined by taking an average of the effect sizes used in three previous studies researching EI; the effect sizes were .5 (Eichmann, 2009), .3 (Leigh, 2012), and .25 (Ferguson, 2014), resulting in an average effect size of .35. With values of an effect size of .35, an alpha level of .05, and a power rating of .8, G*Power 3.1.7 software returned a sample size of 96.

Procedures for Recruitment, Participation, and Data Collection (Primary Data)

I selected participants from a group of volunteers recruited from the Veterans of Foreign Wars and the American Legion as well as from the Walden University participant pool. I directed potential participants to the SurveyMonkey.com website where they viewed a more comprehensive purpose statement, the consent form,

procedures, and expectations information. Once participants finished responding to the

online survey, I expected and desired no further involvement from them.

I collected the data for this research through a survey administered by

SurveyMonkey. I collected service and demographic information such as time in service,

branch of service, ethnicity, age, and length of service for combat and humanitarian

missions along with an EI evaluation (see Appendix A). SurveyMonkey is a low-cost

Internet-based organization that provides a quick turnaround of data in a format that

allows for Statistical Package for Social Sciences (SPSS) assimilation. I included the

informed-consent form in the survey and unless the participant agreed to the terms of the

informed-consent form, they were not advanced to take the survey. The survey took less

than 30 minutes for each participant to complete.

Instrumentation and Operationalization of Constructs

I used the WLEIS to evaluate the EI of participants in this research study. The

WLEIS is a self-report instrument based on the principles of the MSCEIT (Wong & Law,

2002). The WLEIS consists of 16 questions (see Appendix C for a list of the questions)

that measure EI in four dimensions: self-emotion appraisal (SEA), use of emotion (UOE),

regulation of emotion (ROE), and others' emotional appraisal (OEA). The instrument has

been used effectively by other researchers in evaluating the EI of military personnel

(Calloway, 2010; Mula, 2013), providing precedence for its use in this study. I requested

and received written permission (see Appendix B) from the primary developer of the

instrument, Wong. The WLEIS uses a 7-point Likert-type scale that ranges from 1

representing *strongly disagree* to 7 representing *strongly agree*. The instrument

developers reported reliability measures (coefficient alphas) of .89 for SEA, .88 for UOE,

.79 for ROE, and .85 for OEA (Wong & Law, 2002). Mula (2013) reported comparable values of .94 for SEA, .81 for UOE, .87 for ROE, and .83 for OEA in a study.

Data Analysis Plan

I imported data from the survey into SPSS through an Excel spreadsheet provided by SurveyMonkey. I used SPSS to conduct a one-way analysis of variance (one-way ANOVA) or a Welch test of equality of means of the dependent variable (EI score) on the four groups: veterans without combat or humanitarian mission experience, veterans with combat experience, veterans with humanitarian mission experience, and veterans with combat and humanitarian mission experience. Researchers use a one-way ANOVA to evaluate whether the means of the dependent variable differ significantly when compared between groups that differ by a particular feature or that have been exposed to different independent variables (Green & Salkind, 2013). An ANOVA is an *omnibus* test, which means researchers use it to assess complete investigational outcomes (Field, 2013). The ANOVA test allowed testing of the null hypothesis for this research and development of a confidence interval for each correlation. The Welch test of equality of means is a primary substitute for the ANOVA when the assumption for homogeneity is not met (Jan & Shieh, 2013).

Threats to Validity

External Validity

External validity is considered the capacity of a model to enable the researcher to make predictions that can be generalized across a given population (Lanscar & Swait, 2014). In their literature review of threats to validity, Neto and Conte (2014) identified nine threats to the external validity of experiments. One threat to external validity can

arise when a researcher makes conclusions regarding an experiment that is constrained by time and cannot be generalized to earlier or later circumstances (Brutus, Aguinis, & Wassmer, 2013). Testing reactivity arises when participants experience a change in sensitivity to the independent variable because of taking a pretest (Neto & Conte, 2014). The location and situation in which an experiment is conducted can also threaten external validity (Stufflebeam & Coryn, 2014). Another issue that can endanger external validity is when a participant receives several treatments that can lead to the researcher being unable to regulate for the consequences of the previous application of other independent variables (Neto & Conte, 2014)

I did not address the time-constraint threat to external validity in this study. According to Maruyama and Ryan (2014), a researcher who endeavors to address issues of external validity (such as time constraints) should conduct additional studies to determine whether similar results emerge as in the initial investigation. Limitations due to time and funding prevented me from attending to this concern, but future research could be conducted to evaluate this subject. Testing reactivity was not an issue for this study because I did not administer a pretest. It is possible that some participants may have previously undergone EI testing of some sort, but I did not address that possibility in this study. The location and situation threat was also not applicable to this study. The participants were in their natural environments when they answered the online survey. I did not evaluate the multiple-treatment threat in this research. It is possible that participants experienced additional emotional incidents before and after their exposure to the independent variables.

Internal Validity

Internal validity refers to the ability of researchers to conclude that an independent variable triggered a change in the dependent variable (Maruyama & Ryan, 2014). Irvin and Kaplan (2014) addressed seven threats to internal validity that included history, maturation, regression, selection, and attrition. The history threat arises when occurrences that transpire with participants in a study that are unrelated to the study affect the results of the study (Gordon, 2015). Maturation refers to participants becoming older and potentially more astute during the course of the investigation, thereby altering the results of the investigation (Maherally, 2014). Regression refers to the researcher using participants who have extreme scores on the pretest, which could lead to unreliable results (Anestis, Anestis, Zawilinski, Hopkins, & Lilienfeld, 2014). The selection threat to internal validity occurs when a researcher selects participants to participate in the study based on particular attributes that influence them toward particular results (Petrowski, 2012). Attrition occurs when participants in a study quit or fail to finish the study (Sørlie & Ogden, 2014).

The history threat was a viable threat to this study due to the inability to control the time between the deployment and the evaluation of EI skills. Participants could have experienced many events during this period, but the control group would also have external experiences that could have influenced their EI scores. Maturation is similar to history in that participants have matured to differing degrees, but this was the same for all participant groups. The regression threat was not an issue for this study because I did not administer a pretest and did not select participants based on their pretest scores. The selection threat was overcome by ensuring participant selection and inclusion was

random and not based on a particular characteristic other than meeting the independent-variable criteria. Mortality was not a problem because once participants finished the survey, they were finished with their portion of the study.

Construct Validity

Researchers achieve construct validity when the construct being measured is thoroughly elucidated, the instrument used to measure it has been vetted, and the researcher is able to make predictions based on the outcome of its use (Bernard, 2011). Researchers must determine whether the instrument is appropriate to measure the construct, if the theoretical structure used to make the forecasts is not defective, and whether the research design is appropriate to test for the construct (Stufflebeam & Coryn, 2014). Intelligence, ethnicity, and many other constructs used today are subject to dispute and debate (Bernard, 2011) similar to the construct of EI. Another threat to validity is statistical-conclusion validity. This occurs when a researcher arrives at conclusions that are incorrect due to insufficient statistical power or the contravention of statistical suppositions (Maruyama & Ryan, 2014).

The measurement of EI is subject to criticism about the paucity of research into the validity of the instruments used (Lee & Kwak, 2012). The WLEIS has been used as an instrument to measure EI for 13 years and was previously used to measure EI in U.S. military members (Calloway, 2010; Mula, 2013). The WLEIS has been evaluated for use in different cultures (Libbrecht et al., 2012). Pan et al. (2014) ascertained that the WLEIS is reliable and has a Cronbach's alpha of .92. Debate persists about the subjectivity of EI, but this is no different from the study of cognitive ability and ethnicity. Researchers have conducted many studies aimed at evaluating the EI of individuals, and the theory has

been well scrutinized. The use of an ANOVA is appropriate to compare the statistical means of four groups (no deployment, combat deployment, humanitarian mission deployment, and a combination of combat and humanitarian mission deployment) and determine whether the independent variable had an effect on the dependent variable (Field, 2013). Burkholder (personal communication, April 11, 2013) noted that a power value of .8 (or 80%) is adequate to distinguish whether a relationship exists linking the variables being evaluated. The power value for this study was .8.

Ethical Procedures

To ensure research is ethical and participants are protected, researchers must obtain informed consent from participants in the study (Hariss & Atkinson, 2013). Mandal and Parija (2014) wrote, "Informed consent is the bond of trust that is the foundation and the central stone to any research involving human subjects" (p. 78). Researchers must inform participants of the purpose of the research, that participation is voluntary, and that they can quit at any time; participants must know any risks or benefits and must be aware of their rights in ensuring confidentiality (Montalvo & Larson, 2014). For this study, the risks were minimal or nonexistent: all participants' information remains confidential, participants remain anonymous, and I informed participants they had the right to quit at any time if they choose. The IRB approval number is 06-01-16-0049147. The first page of the survey on SurveyMonkey.com contained the consent form. Participants were required to select either a box that stated they read and agreed to participate in the study or a box that stated they did not wish to participate in the study. If they chose the *do not wish to participate* box, they did not advance to take the survey and were not included in the study.

Conflict of interest can arise from the use of employers, coworkers, subordinates, and friends as participants in a study (National Ethics Advisory Committee, 2012). I am a military veteran and currently work for the military as a contractor. I did not make personal requests to any individuals known to me or who work with me. This negated the risk to participants and possible jeopardy of the results of the study. Participants were not paid to participate and did not directly benefit in any manner by being involved in the study.

The data collected are stored on a password-protected computer and on a password-protected portable hard drive. The data will be erased from the computer once the research is complete and will be destroyed from the hard drive 5 years after completion of the research. No participant received or will receive results from their participation in the study. All data collected will remain anonymous to the dissertation committee and to me.

Summary

The purpose of this quantitative design study was to advance public understanding of EI and how the construct correlates with the EI scores of military veterans who served extensively in highly emotional environments. The conceptual framework for this quantitative study was causal process. The dependent variable for this study was the score obtained from the WLEIS instrument. The independent variables were deployments to combat, humanitarian missions, or a combination of deployments to combat and humanitarian missions.

I chose a cross-sectional survey design for this study because it allowed participants to contribute to the study in an informal setting, which helped to improve the

external validity of the research. The population for this study was U.S. military veteran leaders, some who have not been exposed to either combat or humanitarian missions (baseline group) and those who have been exposed to combat missions, humanitarian missions, or both. In this study, I used a multistage stratified design to select research participants with the intent to gather participant groups that are similar ethnically and in gender to the make-up of the U.S. military.

To ensure I conducted the research ethically and protected the participants, I obtained informed consent from each research participant. Data for this study were collected through a survey administered by SurveyMonkey. I collected demographic information such as time in service, branch of service, ethnicity, age, and length of service for combat and humanitarian missions, along with an EI evaluation. I used SPSS to conduct a one-way ANOVA of the dependent variable (EI score) or a Welch test of equality of means on the four groups. Chapter 4 contains sections on the data collection, and a description of the results of this study.

Chapter 4: Results

The purpose of this quantitative nonexperimental survey study was to observe, evaluate, and compare the EI scores of military leaders who served in strong emotional deployments with the EI scores of those who did not serve on strongly emotional assignments to improve knowledge of how strong emotional experiences affect EI. I investigated the four hypotheses revealed in Chapter 1 using a two-section survey instrument. The first section evaluated the EI of participants and the second section determined the demographics of participants. I used the online website SurveyMonkey.com to administer the survey. I analyzed the amassed data using SPSS software. This chapter includes sections on data collection, study results, and a summary. The data collection section contains information on recruitment of participants, the collection period, and participant demographics. The study results section includes an evaluation of statistical assumptions, the statistical-analysis findings, and an evaluation of the hypotheses. I summarize the answers to the research questions in the final section.

Data Collection

I adhered to all procedures outlined in the methodology chapter relating to participant recruitment and selection throughout data collection. The data collection period was 21 days and 164 participants agreed to participate in the study. Of the 164 potential participants, eight were eliminated because they were not military leaders and two did not complete the survey, resulting 154 selected participants. In addition, 22 participants were randomly removed to more closely match ethnic and gender demographics. The resulting 132 participants exceeded the 96 participant size calculated with G*Power 3.1.7 software. I exported the response data from SurveyMonkey in the

form of a Microsoft Excel file. I removed from the file participants who did not complete the survey and participants who did not meet the criteria for military leaders at this time. I converted responses from text responses into corresponding numerical values and imported the data into SPSS for statistical analysis.

Demographic and Service Characteristics

I employed three demographic and eight military service questions to develop data about participants. Demographic data included current age, ethnicity, and gender. The demographic data provided information to evaluate whether participants were representative of the overall military population. Current age could not be evaluated as a characteristic of military demographics because many participants were not currently in the military. Two of the eight service questions determined inclusion in the study and allowed me to assign participants to independent variable groups. The participant demographics for ethnicity closely resembled the actual ethnic makeup of the U.S. military. Participant demographics for gender also closely matched the gender composition of the U.S. military. The branch of military service characteristic was not adjusted with stratified sampling, but each category was within 3.1% of the actual composition of the U.S. military. I used the service characteristic for grade at time of last service to eliminate respondents who did not advance past the grade of E4 because the grade of E5 (1st grade of noncommissioned officers) is generally considered the lowest grade of leadership in the military, although some E4s (such as corporals) are considered junior leaders. Grade at time of last service could not be used for demographic purposes because some respondents were not currently in the military. Demographic data appears in Table 5.

Table 5

Demographic Data

	Demographic	Frequency	Study %	Actual %
Race	African American	21	15.9	16.2
	American Indian	2	1.5	1.3
	Asian or Pacific Islander	5	3.8	4.5
	Caucasian	87	64.4	62.5
	Hispanic	16	11.4	11.3
	Other	4	3.0	4.2
	Total	132	100	100
Gender	Male	110	83.3	83.5
	Female	22	16.7	16.5
	Total	132	100	100
Branch	Army	65	49.2	47.3
	Navy	19	14.4	17.4
	Air Force	25	18.9	21.2
	Marines	20	15.2	12.1
	Coast Guard	3	2.3	2
	Total	132	100	100
Last grade	E5–E6	52	39.4	N/A
	E7–E9	55	41.7	N/A
	O1–O3	8	6.0	N/A
	O4–O6	17	12.9	N/A
	Total	132	100	

The demographic and service survey also contained questions that addressed the total time in service and whether respondents received training in EI. These categories do not address any of the hypotheses, but I evaluated them. I did not assess the service questions that addressed total length of combat deployments, total length of humanitarian or peacekeeping deployments, and age at time of last deployment. Table 6 presents the

frequencies and percentages of the total time in service and whether a participant

received EI training.

Table 6

Total Time in Service and Emotional Intelligence Training

	Response	Frequency	%
Total time in service	4 to 10 years	47	35.6
	11 to15 years	10	7.6
	16 to 20 years	14	10.6
	Over 20 years	61	46.2
Received EI Training	No	90	68.2
	Yes prior to deployment	26	19.7
	Yes from source other than military	16	12.1

Note. EI = emotional intelligence.

Study Results

The survey instrument used to evaluate EI was the WLEIS. Scores from the scale

were evaluated in five scales. The first scale is overall EI. The remaining scales are

subscales of the overall score and are Self-Emotions Appraisal, Others-Emotions

Appraisal, Use of Emotion, and Regulation of Emotion. I obtained the overall score by

adding the scores from all 16 questions. Each subscale score accrued by adding the scores

from the four questions that pertained to the subscale. I scored each question on a 7-point

Likert-type scale with responses that ranged from 1 representing *strongly disagree* to 7

representing *strongly agree*. I conducted a test for Cronbach's alpha for each of the

subscales and the overall WLEIS. The Self-Emotions Appraisal subscale consisted of

four items ($\alpha = .90$), the Others-Emotions Appraisal subscale consisted of four items ($\alpha = .91$), the Use of Emotion subscale consisted of four items ($\alpha = .87$), and the Regulation of

Emotion subscale consisted of four items (α = .95). The WLEIS consisted of 16 items (α = .96). The Cronbach's alpha values appear in Table 7.

Table 7

Cronbach's Alpha of WLEIS

Category	Cronbach's alpha	Cronbach's alpha based on standardized items	*N* of items
Self-Emotions Appraisal	.898	.900	4
Others-Emotions Appraisal	.913	.913	4
Use of Emotion	.867	.868	4
Regulation of Emotion	.951	.953	4
Overall WLEIS	.960	.960	16

Note. WLEIS = Wong and Law Emotional Intelligence Scale.

To examine the four research hypotheses, I conducted one-way ANOVAs to evaluate whether the means of the dependent variable differed when compared between the groups that have been exposed to the independent variables. With ANOVA, four assumptions must be met or accounted for the statistical analysis to be correct: the data must be normally distributed, the data must have homogeneity of variance, data must be measured at the interval level at a minimum, and all responses are independent. The design of the survey satisfied the last two assumptions. I tested the first two assumptions individually for each hypothesis. In the instances when the homogeneity assumption was not met, a Welch test was an alternative to the standard ANOVA. Jan and Shieh (2013) noted, "On the basis of extensive empirical evidence of Type I error control and power performance, Welch's procedure is frequently recommended as the major alternative to the ANOVA *F* test under variance heterogeneity" (p. 72).

Research Question 1

What is the relationship between combat experience and EI, as measured by the WLEIS?

$H_0 1$: No statistically significant relationship exists between military leaders' scores on the WLEIS and their combat experiences.

$H_a 1$: A statistically significant relationship emerges between military leaders' scores on the WLEIS and their combat experiences.

A Shapiro–Wilks test assessed the assumption for normality, and visually with normal Q–Q plots. The results of the Shapiro–Wilk test (presented in Table 8) for the WLEIS scores for none (S–W = .981, df = 46, p = .637) and for combat (S–W = .946 df = 30, p = .130) suggested normality, confirmed visually with normal Q–Q plots (see Figures 8 and 9). I used a Levene's test of homogeneity or variances to evaluate the assumption of homogeneity. The assumption for homogeneity was not met, because p (.030) < α (.05). The results of the Levene's test, $F(1, 74) = 4.913$, p = .030 appear in Table 9.

Table 8

Results of Shapiro-Wilk Test for WLEIS for None and Combat

	Test of normality		
	Shapiro–Wilk		
Deployments of 6 months or longer	Statistic	*df*	Sig.
Total WLEIS Score None	.981	46	.637
Combat	.946	30	.130

Note. WLEIS = Wong and Law Emotional Intelligence Scale.

Table 9

Results of Levene's Test for Homogeneity for None and Combat

Test of homogeneity of variances			
Levene statistic	*df*1	*df*2	Sig.
4.913	1	74	.030
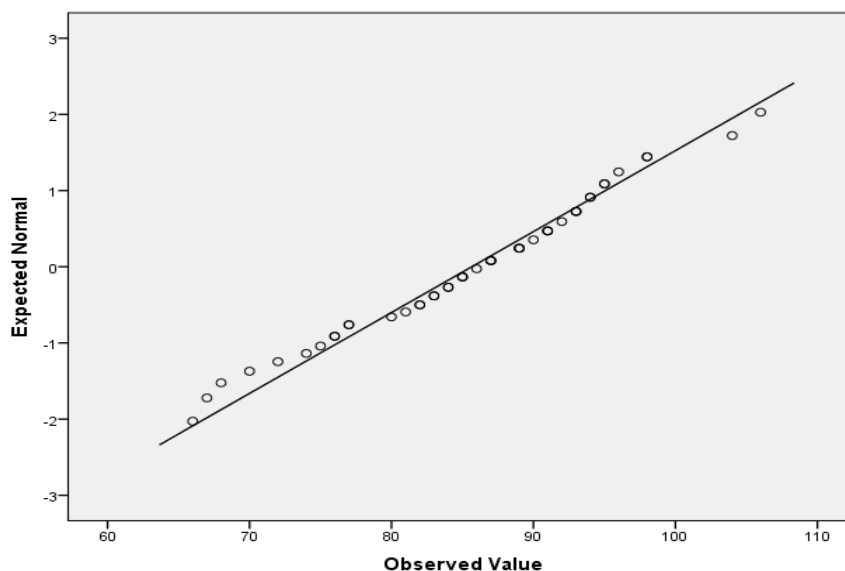
Figure 8. Q-Q plot for total Wong and Law Emotional Intelligence Scale without combat experience.

Because the assumption for homogeneity was not met, I conducted a Welch test of equality of means in place of an ANOVA test. The result of the Welch test was not significant $F(1, 73.997) = .888, p > .05$. This indicated that the mean of the WLEIS score for no combat experience ($M = 85.65, SD = 9.412$), when compared to the mean of the WLEIS score for combat experience ($M = 87.33, SD = 6.144$), did not differ significantly. For this reason, I accepted the null hypothesis (H_01). The Welch test and variable descriptives appear in Tables 10 and 11.
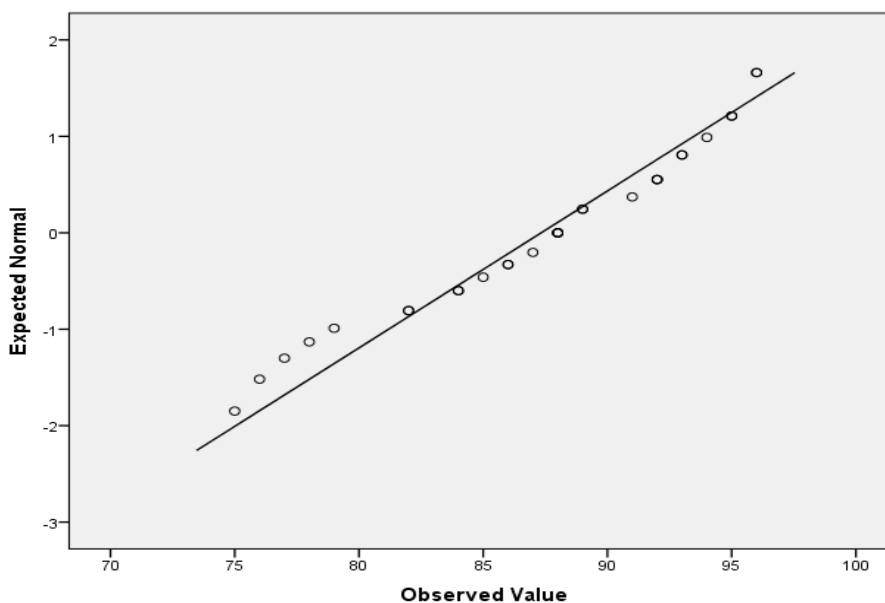
Figure 9. Q-Q plot for total Wong and Law Emotional Intelligence Scale with combat experience.

Table 10

Welch Test Results for Hypothesis 1

	Total WLEIS score			
	Statistic[a]	*df*1	*df*2	Sig.
Welch	.888	1	73.997	.349

Note: a. Asymptotically *F* distributed.

Table 11

Variable Descriptives for Hypothesis 1

					95% confidence interval for mean			
	N	Mean	Std. deviation	Std. error	Lower bound	Upper bound	Min	Max
None	46	85.65	9.412	1.388	82.86	88.45	66	106
Combat	30	87.33	6.144	1.122	85.04	89.63	75	96
Total	76	86.32	8.272	.949	84.43	88.21	66	106

Descriptives total WLEIS score

Research Question 2

What is the relationship between military humanitarian mission experience and emotional intelligence as measured by the WLEIS?

$H_0 2$: No statistically significant relationship exists between military leaders' scores on the WLEIS and their humanitarian mission experiences.

$H_a 2$: A statistically significant relationship emerges between military leaders' scores on the WLEIS and their humanitarian mission experiences.

I assessed the assumption for normality with a Shapiro–Wilk test and visually with normal Q–Q plots. Results of the Shapiro-Wilk test (presented in Table 12) for the WLEIS scores for none (S–W = .981, df = 46, p = .637) and for the WLEIS scores for humanitarian/peacekeeping (S–W = .951 df = 29, p = .195) suggested normality, confirmed visually with normal Q–Q plots (see Figures 10 and 11). I conducted a Levene's test of homogeneity or variances to evaluate the assumption of homogeneity. The assumption for homogeneity was not met, because p (.019) < α (.05). Results of the Levene's test, $F(1, 73)$ = 5.765, p = .019 appear in Table 13.

Table 12

Results of Shapiro-Wilk Test for WLEIS for None and Humanitarian

	Test of normality		
		Shapiro–Wilk	
Deployments of 6 months or longer	Statistic	*df*	Sig.
Total WLEIS Score — None	.981	46	.637
Humanitarian	.951	29	.195

Table 13

Results of Levene's Test for Homogeneity for None and Humanitarian

Test of homogeneity of variances			
Levene statistic	*df*1	*df*2	Sig.
5.765	1	73	.019
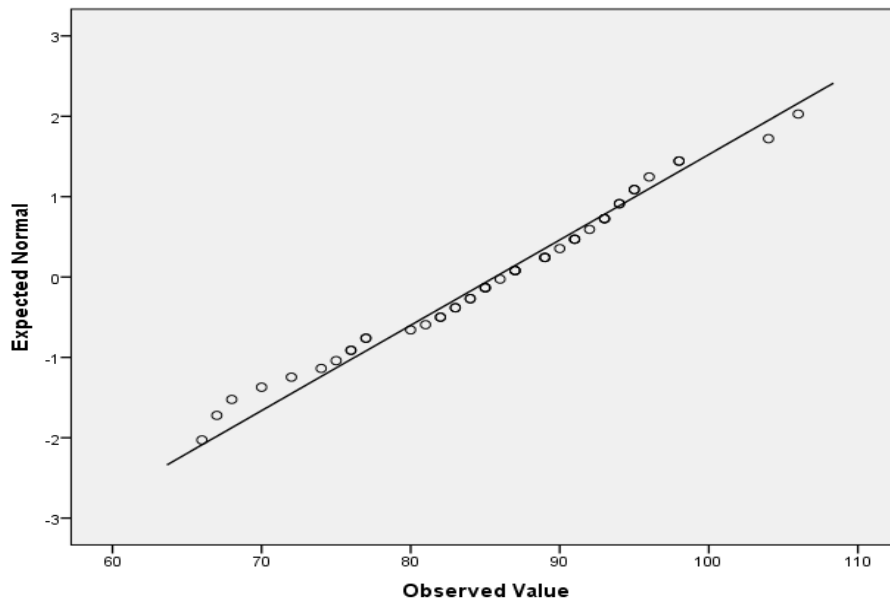
Figure 10. Q-Q plot for total Wong and Law Emotional Intelligence Scale without humanitarian experience.

Because the assumption for homogeneity was not met, I conducted a Welch test of equality of means in place of an ANOVA test. The result of the Welch test was not significant $F(1, 72.976) = 3.834$, $p > .05$. This indicated that the mean of the WLEIS score for no humanitarian/peacekeeping experience ($M = 85.65$, $SD = 9.412$), when compared to the mean of the WLEIS score for humanitarian/peacekeeping experience, ($M = 89.14$, $SD = 6.004$) did not differ significantly. For this reason, I accepted the null hypothesis (H_02). The Welch test and variable descriptives appear in Tables 14 and 15.
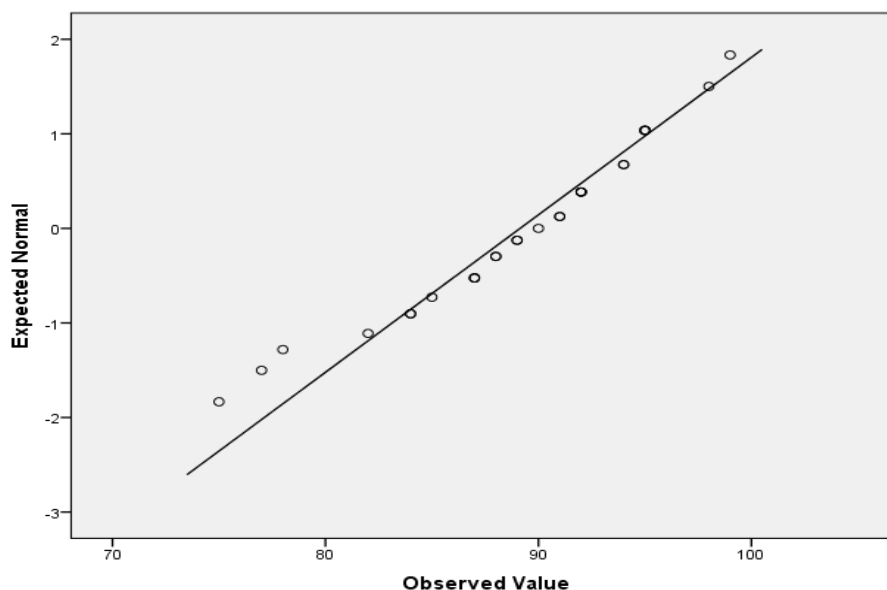
Figure 11. Q-Q plot for total Wong and Law Emotional Intelligence Scale with humanitarian experience.

Table 14

Welch Test Results for Hypothesis 2

	Total WLEIS score			
	Statistic[a]	*df*1	*df*2	Sig.
Welch	3.834	1	72.976	.054

Note: a. Asymptotically *F* distributed.

Table 15

Variable Descriptives for Hypothesis 2

	Descriptives total WLEIS score						
					95% confidence interval for mean			
	N	Mean	Std. deviation	Std. error	Lower bound	Upper bound	Min	Max
None	46	85.65	9.412	1.388	82.86	88.45	66	106
Humanitarian	29	89.14	6.004	1.115	86.85	91.42	75	99
Total	75	87.00	8.392	.969	85.07	88.93	66	106

Research Question 3

What is the relationship between a combination of combat and military humanitarian mission experience and emotional intelligence as measured by the WLEIS?

$H_0$3: No statistically significant relationship exists between military leaders' scores on the WLEIS and their combined combat and humanitarian mission experiences.

H_a3: A statistically significant relationship emerges between military leaders' scores on the WLEIS and their combined combat and humanitarian mission experiences.

I assessed the assumption for normality with a Shapiro–Wilk test and visually with normal Q–Q plots. Results of the Shapiro-Wilk test (presented in Table 16) for the WLEIS scores for none (S–W = .981, df = 46, p = .637), and for the WLEIS scores for combat and humanitarian/peacekeeping (S–W = .967, df = 27, p = .514), suggested normality, confirmed visually with normal Q–Q plots (see Figures 12 and 13). I conducted a Levene's test of homogeneity or variances to evaluate the assumption of homogeneity. The assumption for homogeneity was not met, because p (.000) < α (.05). Results of the Levene's test, $F(1, 71) = 20.889$, p = .000 appear in Table 17.

Table 16

Results of Shapiro-Wilk Test for WLEIS for None and Combat and Humanitarian

Test of normality			
	Shapiro–Wilk		
Deployments of 6 months or longer	Statistic	*df*	Sig.
Total WLEIS score — None	.981	46	.637
Combat and humanitarian	.967	27	.514

Table 17

Results of Levene's Test for Homogeneity for None and Combat and Humanitarian

Test of homogeneity of variances			
Levene statistic	*df*1	*df*2	Sig.
20.889	1	71	.000
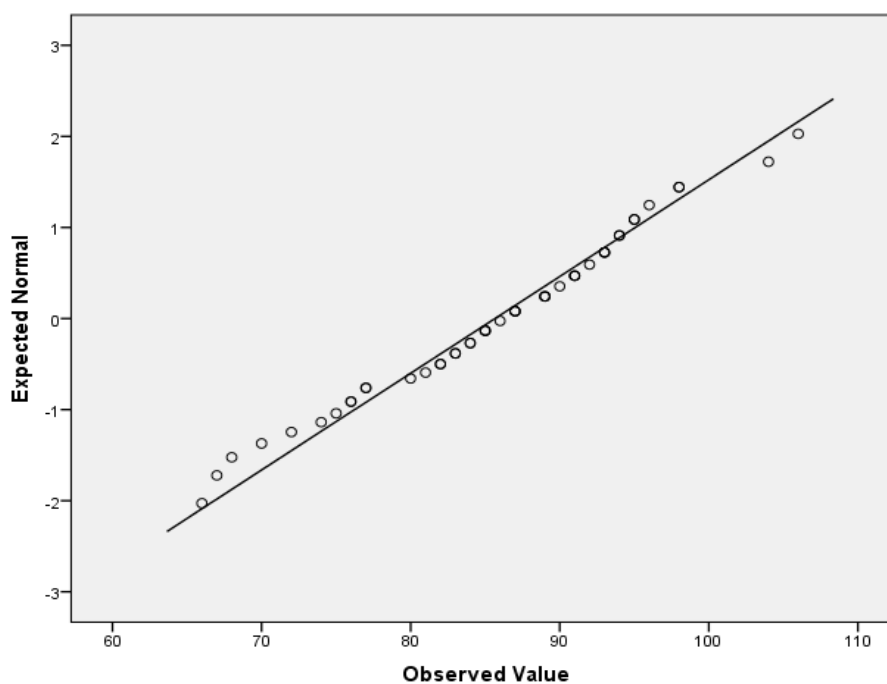
Figure 12. Q-Q plot for total Wong and Law Emotional Intelligence Scale without combat and humanitarian experience.

Because the assumption for homogeneity was not met, I conducted a Welch test of equality of means in place of an ANOVA test. The result of the Welch test was significant $F(1, 59.506) = 38.062$, $p < .05$. This indicated that the mean of the WLEIS score for no combat and humanitarian/peacekeeping experience ($M = 85.65$, $SD = 9.412$), when compared to the mean of the WLEIS score for combat and humanitarian/peacekeeping experience ($M = 94.96$, $SD = 3.082$), differed significantly.

For this reason, I rejected the null hypothesis ($H_0 3$). The Welch test and variable
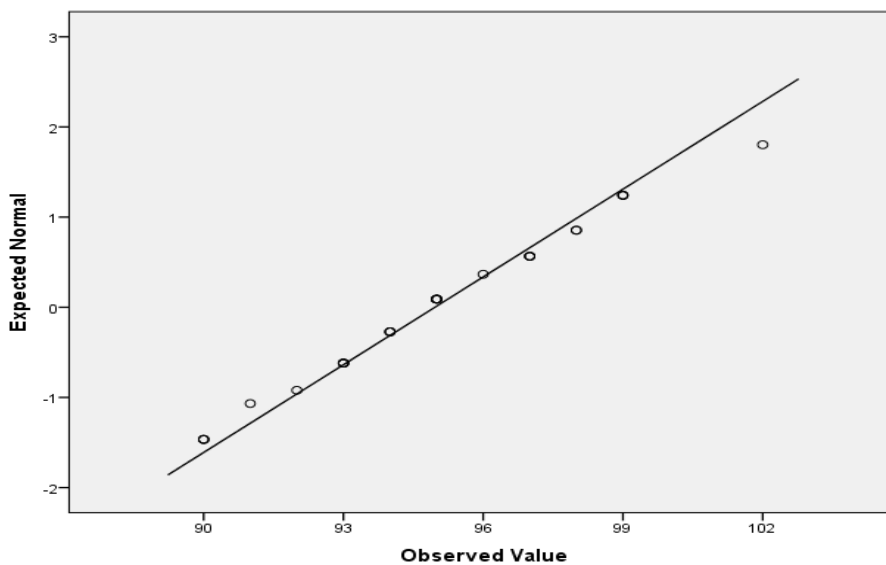
descriptives appear in Tables 18 and 19.

Figure 13. Q-Q plot for total Wong and Law Emotional Intelligence Scale with combat and humanitarian experience.

Table 18

Welch Test Results for Hypothesis 3

	Total WLEIS score			
	Statistic[a]	*df*1	*df*2	Sig.
Welch	38.062	1	59.506	.000

Note: a. Asymptotically *F* distributed.

Table 19

Variable Descriptives for Hypothesis 3

| | | | | | 95% confidence interval for mean | | | |
	N	Mean	Std. deviation	Std. error	Lower bound	Upper bound	Min	Max
None	46	85.65	9.412	1.388	82.86	88.45	66	106
Combat and humanitarian	27	94.96	3.082	.593	93.74	96.18	90	102
Total	73	89.10	8.904	1.042	87.02	91.17	66	106

Descriptives total WLEIS score

Research Question 4

To what extent does a statistically significant difference exist between the scores that military leaders with combat experience achieve on the WLEIS compared to the scores that military leaders with humanitarian mission experience achieve on the WLEIS?

> H_04: No statistically significant difference exists between the scores that military leaders with combat experience achieve on the WLEIS compared to the scores that military leaders with humanitarian mission experience achieve on the WLEIS.

> H_a4: A statistically significant difference exists between the scores that military leaders with combat experience achieve on the WLEIS compared to the scores that military leaders with humanitarian mission experience achieve on the WLEIS.

I assessed the assumption for normality with a Shapiro–Wilk test and visually with normal Q–Q plots. The results of the Shapiro–Wilk test (presented in Table 20) for the WLEIS scores for combat (S–W = .946, df = 30, p = .130), and for the WLEIS scores for humanitarian/peacekeeping (S–W = .951 df = 29, p = .195), suggested normality, confirmed visually with normal Q–Q plots (see Figures 14 and 15). I conducted a Levene's test of homogeneity or variances to evaluate the assumption of homogeneity. The assumption for homogeneity was met, because p (.773) > α (.05). The results of the Levene's test, $F(1, 57)$ = .084, p = .773 appear in Table 21.

Table 20

Results of Shapiro-Wilk Test for WLEIS for Combat and Humanitarian

Test of normality			
	Shapiro–Wilk		
Deployments of 6 months or longer	Statistic	*df*	Sig.
Total WLEIS score — Combat	.946	30	.130
Total WLEIS score — Humanitarian	.951	29	.195

Table 21

Results of Levene's Test for Homogeneity for Combat and Humanitarian

Test of homogeneity of variances			
Levene statistic	*df*1	*df*2	Sig.
.084	1	57	.773
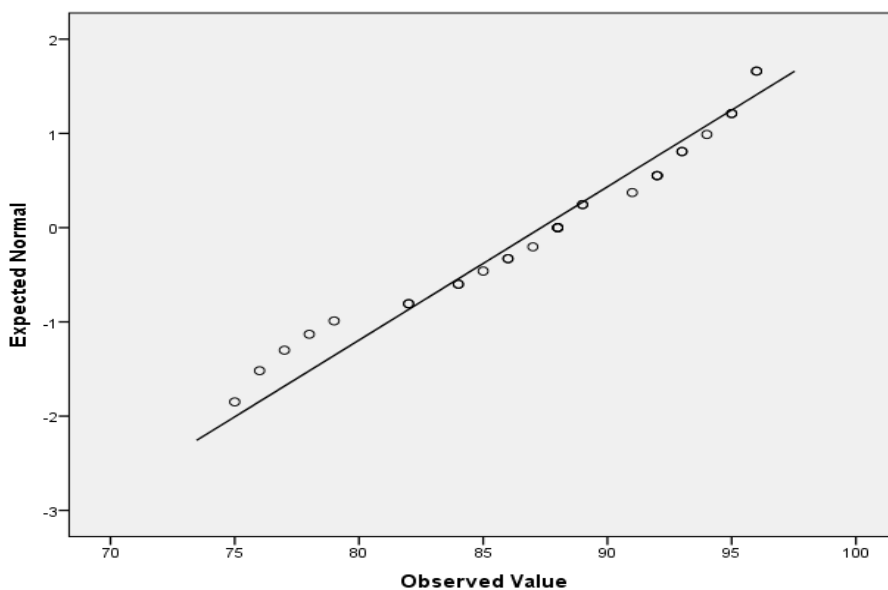
Figure 14. Q-Q plot for total WLEIS with combat experience.
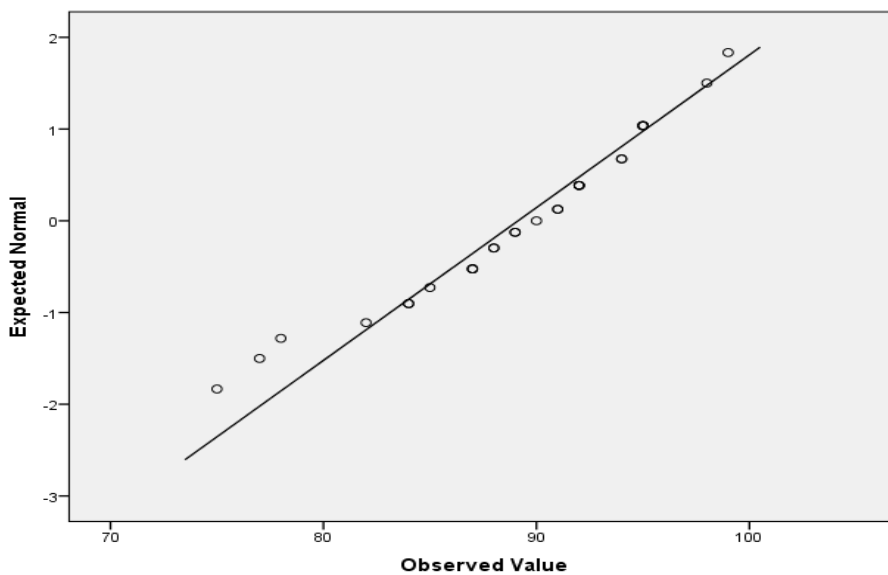

Figure 15. Q–Q plot for total WLEIS with humanitarian experience.

Because the assumption for homogeneity was met, I conducted an ANOVA test. The result of the ANOVA test was not significant $F(1, 57) = 1.301, p > .05$. This indicated that the mean of the WLEIS score for combat experience ($M = 87.33, SD = 6.144$), when compared to the mean of the WLEIS score for humanitarian/peacekeeping

experience (M = 89.14, SD = 6.004), did not differ significantly. For this reason I

accepted the null hypothesis ($H_0$4). The ANOVA test and variable descriptives appear in

Tables 22 and 23.

Table 22

ANOVA Test Results for Hypothesis 4

	Total WLEIS score				
	Sum of squares	*df*	Mean square	*F*	Sig.
Between groups	48.021	1	48.021	1.301	.259
Within groups	2104.115	57	36.914		
Total	2152.136	58			

Table 23

Variable Descriptives for Hypothesis 4

	Descriptives total WLEIS score							
					95% confidence interval for mean			
	N	Mean	Std. deviation	Std. error	Lower bound	Upper bound	Min	Max
Combat	30	87.33	6.144	1.122	85.04	89.63	75	96
Humanitarian	29	89.14	6.004	1.115	86.85	91.42	75	99
Total	59	88.22	6.091	.793	86.63	89.81	75	99

Summary

The purpose of this study was to understand the relationship between extreme

emotional experiences and EI for military leaders. SurveyMonkey was the platform for

participants to answer survey questions. A total of 164 participants responded. Of the 164

participants, I eliminated eight because they were not military leaders, two because they

did not complete the survey, four because of outlier scores, and 18 to more closely match

ethnic and gender demographics, resulting in 132 participants for the study. The

participant sample was representative of the population of interest: U.S. military leaders.

I used SPSS software to evaluate the WLEIS and the data that developed. All four

subscales of the WLEIS and the overall WLEIS were found to be reliable (see Table 7). I

conducted tests to determine whether the data passed the assumptions for normality of

distribution and homogeneity of variance. All data sets passed for normality of

distribution but three of the four failed for homogeneity of variance. When the data sets

failed the assumption of homogeneity of variance, I performed a Welch test of equality of

means. When the assumption of homogeneity of variance was confirmed, I performed an

ANOVA. A summary of the hypotheses testing appears in Table 24.

Table 24

Hypotheses Testing Summary

Null hypothesis	Test	F value	p value	Accept/reject
$H_0 1$: No statistically significant relationship exists between military leaders' scores on the WLEIS and their combat experiences.	Welch	.888	$> .05$	Accepted
$H_0 2$: No statistically significant relationship exists between military leaders' scores on the WLEIS and their military humanitarian mission experiences.	Welch	3.834	$> .05$	Accepted
$H_0 3$: No statistically significant relationship exists between military leaders' scores on the WLEIS and their combined combat and humanitarian mission experiences.	Welch	38.062	$< .05$	Rejected
$H_0 4$: No statistically significant difference exists between the scores that military leaders with combat experience achieve on the WLEIS compared to the scores that military leaders with humanitarian mission experience achieve on the WLEIS.	ANOVA	1.301	$> .05$	Accepted

Chapter 5 includes a discussion of the findings, an interpretation of the findings,

and limitations of the study. Chapter 5 also contains recommendations for further

research. Last, Chapter 5 includes a section on implications for social change and a

conclusion.

Chapter 5: Discussion, Conclusions, and Recommendations

Studies have been conducted that link EI with leadership effectiveness and emergence (Brackett et al., 2011; Cavazotte et al., 2012; Sadri, 2012). In addition to contributing to workplace performance, EI contributes to success in all aspects of an individual's life (Sewell, 2011). The purpose of this quantitative nonexperimental survey study was to observe, evaluate, and compare the EI scores of military leaders who served in strong emotional deployments with the EI scores relative to those who did not serve in strong emotional assignments to improve knowledge of how strongly emotional experiences affect EI. The goal was to improve the knowledge of how strong emotional experiences affect EI. In my review of current literature, I found no other studies that investigated the effect of experience on EI. Military leaders, past and present, were invited to participate in the study.

I used a cross-sectional survey to elicit data from 132 randomly selected military leader participants. I used SPSS version 21.0 to identify the descriptive statistics of the participants and to analyze the data to determine whether the means of the dependent variable differed significantly when compared between groups that were exposed to different independent variables. The dependent variable was the scores military leaders attained on the WLEIS, and the independent variable was the deployment experiences military leaders have undergone. This chapter includes a discussion of the significance and meaning of the research analysis and results contained in Chapter 4. The chapter also includes sections that address the limitations of the study, recommendations for further research, implications for social change and practice, and a conclusion.

Interpretation of Findings

The literature review in Chapter 2 revealed that EI aligns with the skills and characteristics that transformational leaders exhibit (Goleman, 1998; Harms & Credé, 2010; Hess & Bacigalupo, 2011). The review also showed that EI can improve with focused training (Grant, 2007; McEnrue et al., 2009; Turner & Lloyd-Walker, 2008) and the gains are persistent (Nelis et al., 2009). In addition, people with more emotional experiences are more able to adapt to variations, are more resourceful, and are more appreciative of the emotions of others and their effects on situational change (Roy & Chaturvedi, 2011). The U.S. Army has recognized that EI is critical to unit accomplishment and solidity, and has undertaken steps to improve soldiers' emotional well-being and ability to understand the emotions of others in their unit and civilians they encounter in executing their duties (Sewell, 2011). Mindfulness-based mind-fitness training is a program presented to some service members before deployments with the purpose of improving EI and thereby enhancing unit and individual success during deployment (Heydenfeldt et al., 2011). The focus of this study was to evaluate whether the extreme emotional experiences that military leaders undergo during combat or humanitarian mission deployments improve their scores on the WLEIS.

The central question for the study was: Do the training and experience that military leaders undergo in preparation for and during deployment on combat or humanitarian missions increase their EI abilities? I developed four hypotheses based on the central question outlined in Chapter 3. In Chapter 4, I described how I assessed the hypotheses, summarized in Table 24. I rejected the null hypothesis for Hypothesis 3.

Figure 16 graphically presents the differences in the mean scores of the WLEIS of the

four groups evaluated in this study.
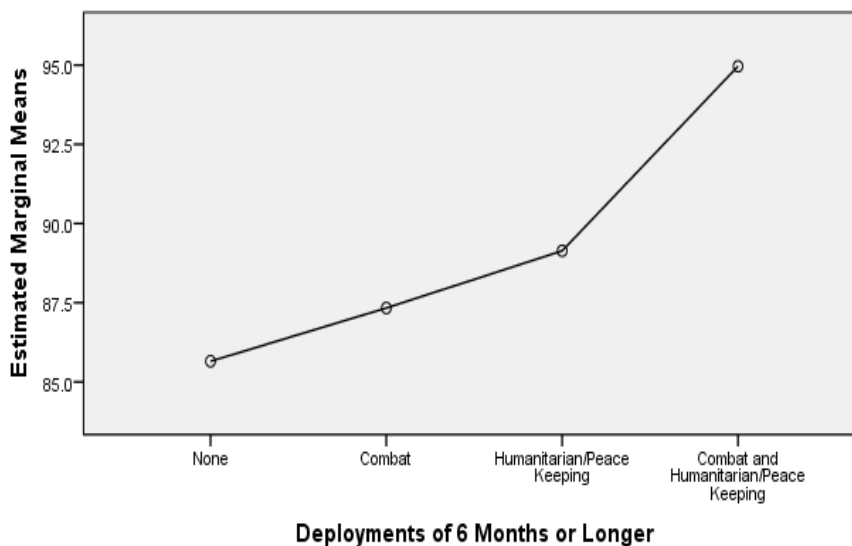
Figure 16. Mean scores on the Wong and Law Emotional Intelligence Scale of four
groups.

Research Question 1 queried whether a relationship exists between combat

experience and EI, as measured by the WLEIS. The null hypothesis developed for this

question was: No statistically significant relationship exists between military leaders'

scores on the WLEIS and their combat experiences. Although the mean score of the

WLEIS for combat ($M = 87.33$, $SD = 6.144$) was higher than the mean score of the

WLEIS for no combat ($M = 85.65$, $SD = 9.412$), the result of the Welch test was not

significant $F(1, 73.997) = .888$, $p > .05$. Therefore, I accepted the first null hypothesis,

signifying that combat experience is not a significant contributor to increased EI.

Research Question 2 inquired whether a relationship exists between humanitarian

mission experience and EI, as measured by the WLEIS. The null hypothesis for this

question was: No statistically significant relationship exists between military leaders' scores on the WLEIS and their humanitarian mission experiences. A comparison of the mean score of the WLEIS for humanitarian service ($M = 89.14$, $SD = 6.004$) and the mean score of the WLEIS for no humanitarian service ($M = 85.65$, $SD = 9.412$) showed a noticeable relationship that fell slightly short of significance, as indicated by the result of the Welch test $F(1, 72.976) = 3.834$, $p > .05$. The significance level for this hypothesis was $p = .054$. Therefore, although an obvious relationship exists, I accepted the second null hypothesis, signifying that humanitarian mission experience is not a significant contributor to increased EI.

Research Question 3 asked whether a relationship exists between a combination of combat and humanitarian mission experience and EI, as measured by the WLEIS. The null hypothesis I developed for this question was: No statistically significant relationship exists between military leaders' scores on the WLEIS and their combined combat and humanitarian mission experiences. The mean of the WLEIS score for no combat and humanitarian/peacekeeping experience ($M = 85.65$, $SD = 9.412$), when compared to the mean of the WLEIS score for combat and humanitarian/peacekeeping experience ($M = 94.96$, $SD = 3.082$), differed significantly and the result of the Welch test was $F(1, 59.506) = 38.062$, $p < .05$. Therefore, I rejected the third null hypothesis, signifying that a combination of combat and humanitarian mission experience is a significant contributor to increased EI.

I designed Research Question 4 to answer the extent to which a difference emerged in the scores that military leaders with combat experience achieved on the WLEIS compared to the scores military leaders with humanitarian mission experience

achieved on the WLEIS. The null hypothesis developed for this question was: No statistically significant difference exists between the scores that military leaders with combat experience achieve on the WLEIS compared to the scores that military leaders with humanitarian mission experience achieve on the WLEIS. The comparison of the mean score of the WLEIS for combat ($M = 87.33$, $SD = 6.144$) and the mean score of the WLEIS humanitarian service ($M = 89.14$, $SD = 6.004$) did not differ significantly. The result of the ANOVA test was not significant $F(1, 57) = 1.301$, $p > .05$. Therefore, I accepted the fourth null hypothesis, signifying that although the mean score of the WLEIS for humanitarian mission experience was higher than the mean score of the WLEIS for combat experience, the difference was not significant.

The results of the analysis of the first three hypotheses indicate the mean EI scores of all groups that experienced the independent variable treatment were higher than the mean EI score of the group that did not experience an independent variable treatment. The groups that only experienced the combat or humanitarian mission treatment were not statistically significant with rounded p values of .35 and .05 (value not rounded to two decimal places was .054) respectively. The p value for the humanitarian mission group is close enough to $p < .05$ that it is possible that in a different study with different participants the value could fall below the .05 threshold. The group that experienced a combination of combat and humanitarian mission treatments was statistically significant with a p value of .00. The result of the combined group suggests the effects of the combat and humanitarian mission experience treatments are interactive.

Limitations of the Study

The primary limitation of this study that pertains to generalizability, validity, and reliability is the cross-sectional approach used. I used a cross-sectional survey design because I did not have access to the same set of participants before and after the application of the independent variables. It would have been preferable to evaluate several entire units from different branches of the military prior to deployment and then again after deployment. This process would have ensured that any changes to EI could be directly attributed to their deployments. I used a multistage stratified sampling technique to increase the ability to generalize the results of this study and improve external validity. I ensured that the sample was representative of the overall population of the U.S. military in gender, ethnicity, and branch of service.

Time and funding were also limitations to this study. I used the WLEIS to measure the EI of participants. The WLEIS is useful because it is short, compared to other instruments that can be used to evaluate EI, and it is free to use. Thus, I was able to increase the number of participants by limiting the time required to respond to the survey. In addition, the WLEIS does not require an outside organization to grade the results. The instrument is a self-report survey administered on the Internet. This means the answers from respondents must be assumed to be true and accurate. A more comprehensive ability-based test such as the MSCEIT lessens the potentiality of the respondent to insert personal bias into the results of their test. The MSCEIT is, however, expensive and takes longer to administer. This would have made it cost prohibitive and could have led to fewer participants.

Recommendations

Based on the strengths and limitations of this study, I recommend additional research to address the central problem. The problem was the deficiency in knowledge about the influence that emotional experiences have on the EI of military leaders. The results of this study show that a relationship exists between emotional experiences and the EI of military leaders. This study is, according to the literature review in Chapter 2, the first of its kind, and will need to be replicated to examine reliability and solidify generalizations. It was necessarily broad based and focused only on determining whether a relationship exists between extreme emotional experiences and EI in military leaders.

An experimental study in which the researcher has full access to the participants before and after deployment could provide increased reliability and validity of the research. Potentially, a researcher could have greater influence on the type, length, and focus of EI training prior to deployments as well. A study of this type could be narrowed to examine the experiences to which different branches of the military are exposed. The Army and the Air Force, for example, have different missions in combat and it would be expected that the effects of the different missions would result in different EI changes. In addition, because the experiences that military leaders encounter in combat and humanitarian missions vary greatly, depending on the mission, their duty position, and their interaction with civilians and enemies, the independent variables could be refined to address the variations.

In this study, whether a military leader underwent EI training prior to deployment was considered part of the overall experience. A future study could be conducted that establishes the training or lack thereof as the one of the independent variables. The

training could have variances in duration, focus, and time proximity to deployment to determine which is more effective and durable for future deploying military leaders. Researchers could conduct studies to determine whether different programs work better for different roles and missions in the military. The importance of these studies should not be underestimated because they could potentially lead to fewer casualties and quicker diagnoses of problems like posttraumatic-stress disorder.

I used humanitarian mission experience as a broad variable in this study. Goss (2013) defined humanitarian missions as peacekeeping missions conducted by the U.S. military to protect civilians, provide humanitarian assistance, and ensure the basic human rights of noncombatants or relief efforts, following natural disasters. Peacekeeping and relief efforts are vastly different in their design and execution. Peacekeeping efforts, for example, may require the use of force to separate combatants from noncombatants. During relief efforts, the military does not typically expect to use force. In addition, the locations of humanitarian missions vary greatly resulting in service members engaging with people from different cultures with different emotional expressions and expectations. Future research could be conducted that would differentiate humanitarian missions into peacekeeping and relief missions as independent variables or within different regions and cultures as independent variables.

The result of the analysis for the third hypothesis showed that the effect of the combination of combat and humanitarian missions on EI scores was statistically significant. The degree to which the effect of either combat or humanitarian mission had on the combination could be further evaluated. In this study, the groups were not comprised of the same participants. In a future study, participants that have served on one

type of mission (combat or humanitarian) could be evaluated for changes in their EI scores and then again if they serve on the other type of mission. This would allow for research into whether the combined effects are additive or interactive.

Nelis et al. (2009) found in their study that EI scores of participants that receive EI training remained elevated and improved 5 months after completing the EI education. The study by Nelis et al. (2009) demonstrated the persistence of EI scores after training. A future study could be conducted to determine whether gains in EI due to exposure to emotional experience are also persistent. Participants that are going to deploy on either a combat or a humanitarian mission could be evaluated for EI prior to deployment, after deployment, and then again after a specified period has passed.

Additional research could be conducted that uses different measurement tools on different populations that are often exposed to extreme emotional experiences. If time and funding are not an issue, alternative instruments could be used to eliminate participant bias and gain a more comprehensive evaluation of participant EI. A 360-degree evaluation could be used, for example, to gather feedback for a participant, their peers, and their supervisor to establish a more complete score. The focus of this study was on military leaders. Law-enforcement personnel and fire fighters are also often exposed to extreme emotional experiences. Studies could be conducted to determine whether their experiences affect their EI and if those experiences affect them differently.

Implications

Social Change

The results of this study showed that military leaders who have been deployed on combat and humanitarian missions obtain higher scores on the WLEIS. EI has been

related to transformational leadership (Harms & Crede, 2010; Meredith, 2008) and

success in the workplace (Cherniss, 2010; Côté & Hideg, 2011; Goleman, 1998).

Subordinates of leaders who score high in EI are more likely to succeed professionally

(Beverly et al., 2012). Leaders who have high levels of EI are better able to adapt to

change and adopt change, as well as influence others to do the same (Mittal & Sindhu,

2012). For these reasons, corporations should want to employ military leaders who have

been deployed on extreme emotional missions. This could have a significant effect on

decreasing the employment gap that exists for military veterans. By hiring military

leaders, organizations would immediately improve the overall EI of their organizations

and would also see additional improvements by influencing subordinates of the military

leaders.

Some members of the public have a negative impression of military leaders and

members, viewing them as cold and heartless. Many people only think of them as killers

and do not recognize the benefits that military veterans can contribute, based on their

emotional experiences. The inferences made as a result of this study could help change

these prejudices. The results of this study show that military leaders can grow in EI due

to their experiences and are capable of empathy, understanding, and respecting the

emotions of others.

Theoretical

This study contributes to EI theory and ELT. This study advances EI theory by

adding to the existing literature on the effect of emotional experiences on EI. Many

studies have shown that training can improve EI scores. However, a paucity of literature

relates emotional experiences and EI. This study could lead to future research that will

address this issue and close the gap in the literature. This study also adds to the current

literature in experiential learning by showing that military leaders have converted their

emotional experiences into intelligence. In many cases, this added intelligence was

gained independently of a formal training program designed to improve EI and can

clearly be ascribed to experiential learning. Military leaders deployed on combat,

humanitarian, or a combination of combat and humanitarian missions were forced to

learn from the good and bad decisions they made, based on their emotions.

Practical

Leaders of military and civilian organizations can use the results of this study.

The literature review demonstrates that leaders and subordinates who score high in EI

contribute to greater organizational success. In addition, personnel who score high in EI

are better able to manage stress and adapt to change. Adapting to change is a critical skill

in rapidly shifting global business environment of today. The literature review also

contained information showing that EI can improve with training and that the

improvements are lasting. Organizations should take this knowledge and build their own

EI training programs or hire someone to conduct training for them. The results of Chapter

4 demonstrated that extreme emotional experiences increase the EI of military leaders.

This information could be used by civilian organizations to increase the EI of their

associations by hiring military veterans. Increasing the EI of organizations would

translate to greater organizational success and organizations that are better equipped to

respond to change in a manner that is less stressful for the workforce.

Conclusions

EI is a powerful concept that is still new and, thus, is not fully understood or accepted. The purpose of this study was to advance the knowledge base of this concept by observing, evaluating, and comparing the EI scores of military leaders who served during strongly emotional deployments with the EI scores relative to those who did not serve on strongly emotional assignments. The results of this study demonstrate that extreme emotional experiences can lead to an improvement in EI scores. This is important because EI aligns with personal and professional success (Sadri, 2012; Sewell, 2011), better health (Zeidner et al., 2012), and happiness (Bar-On, 2010). EI can also improve with training programs and these improvements persist.

This study has added to current literature on EI and ELT. The results in Chapter 4 of this study show that extreme emotional experiences can positively affect the EI scores of military leaders. These results could influence the unemployment rates of military veterans and the perception that many have of military members, showing that they can be empathetic, understanding, and respecting of others' emotions. Civilian organizations could use the results of this study to increase their organizations' overall EI by hiring military veterans who have served in either combat or on humanitarian mission or both.

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Appendix A: Demographic and Service Questions

1. Branch of Service
   a. Army
   b. Navy
   c. Air Force
   d. Marines
   e. Coast Guard
2. Current Age
   a. Under 18
   b. 18 to 25
   c. 26 to 35
   d. 36 to 45
   e. 46 to 55
   f. 56 to 64
   g. 65 and older
3. Race
   a. African American
   b. American Indian
   c. Asian or Pacific Islander
   d. Caucasian
   e. Hispanic
   f. Other
4. Gender
   a. Male
   b. Female
5. Grade at Time of Last Military Service
   a. E1-E4
   b. E5-E6
   c. E7-E9
   d. O1-O3
   e. O4-O6
   f. O7-O10
6. Total Time in Service
   a. 0 to 3 Years
   b. 4 to 10 years
   c. 11 to 15 Years
   d. 16 to 20 Years
   e. 20 or More Years

7. Deployments (6 months or longer)
   a. None
   b. Combat
   c. Humanitarian/Peace Keeping
   d. Combat and Humanitarian/Peace Keeping
8. Total Length of Combat Deployments
   a. Less Than 6 Months
   b. 6 to 12 Months
   c. 13 to 18 Months
   d. 19 to 24 Months
   e. 25 Months or longer
9. Total Length of Humanitarian/Peace Keeping Deployments
   a. Less Than 6 Months
   b. 6 to 12 Months
   c. 13 to 18 Months
   d. 19 to 24 Months
   e. 25 Months or longer
10. Have you Received Training in Emotional Intelligence
   a. No
   b. Yes Prior to Deployment
   c. Yes During Deployment
   d. Yes from Source Unrelated to Military
11. Age at Time of Last Deployment
   a. 18 to 25
   b. 26 to 35
   c. 36 to 45
   d. 46 to 55
   e. 55 and older

Appendix B: WLEIS Instrument Questions

The instrument uses a 7 point Likert scale:
1. Strongly Disagree
2. Disagree
3. Somewhat Disagree
4. Neither Disagree nor Agree
5. Somewhat Agree
6. Agree
7. Strongly Agree

The Questions are divided into four dimensions:

Self-Emotions Appraisal (SEA)
1. I have a good sense of why I have certain feelings most of the time.
2. I have good understanding of my own emotions.
3. I really understand what I feel.
4. I always know whether or not I am happy.

Others-Emotions Appraisal (OEA)
5. I always know my friends' emotions from their behavior.
6. I am a good observer of others' emotions.
7. I am sensitive to the feelings and emotions of others.
8. I have good understanding of the emotions of people around me.

Use of Emotion (UOE)
9. I always set goals for myself and then try my best to achieve them.
10. I always tell myself I am a competent person.
11. I am a self-motivating person.
12. I would always encourage myself to try my best.

Regulation of Emotion (ROE)
13. I am able to control my temper so that I can handle difficulties rationally.
14. I am quite capable of controlling my own emotions.
15. I can always calm down quickly when I am very angry.
16. I have good control of my own emotions

Appendix C: Permission to use WLEIS

Request

Professor Wong,
Please allow me to introduce myself. My name is Robert Crosby, and I am a student at Walden University in the Management PhD program with a specialty in leadership and organizational change. The topic of my dissertation is the correlation of emotional intelligence and prolonged exposure to emotional situations (combat and military humanitarian missions). I request permission to use the Wong and Law Emotional Intelligence Scale (WLEIS) in my dissertation research to collect emotional intelligence information. I have read several dissertations in which the authors used the WLEIS to collect data as well as your 2002 article, The Effects of Leader and Follower Emotional Intelligence on Performance and Attitude: An Exploratory Study and I believe that the instrument would be appropriate and helpful for my study. It would be an honor to be allowed to use your survey instrument in my work. I would also request any additional information that is required in the use of the WLEIS.
With upmost respect,
Robert Crosby, M.B.A.
robert.crosby2@waldenu.edu

Permission

Dear Robert,
So far as you are using the scale for non-profit making research projects, feel free to use it. As the scale use Likert-type response format, there is no special treatment in calculating the indicator of EI. You simply need to take the average or the sum of all the 16 items. I attach the two papers reporting the development and validation of the scale, in case you do not have. The items are reported in the appendix of the two papers. Good luck to your study.
Regards,
C.S. Wong