ABSTRACT

Richard J. Gough, STRESS MANAGEMENT OF NORTH CAROLINA COMMUNITY COLLEGE PRESIDENTS: THE IMPACT OF EMOTIONAL INTELLIGENCE (Under the direction of Dr. Sandra Seay), Department of Educational Leadership, May, 2011.

Occupational stress has long been associated with negative outcomes for both individuals and organizations. Studies suggest that physical and psychological health, as well as job satisfaction and organizational commitment, decrease as a result of elevated levels of occupational stress. Recently researchers have proposed that an intertwined relationship exists between emotional intelligence and occupational stress and that emotional intelligence plays a role in adaptive coping (Austin, Saklofske, & Egan, 2005; Gardner, 2005; Sahar-Khiz, 2010).

This study systematically examined this contention by seeking to determine whether there is a relationship between emotional intelligence and stress management of North Carolina community college presidents. This was accomplished through a quantitative study of these constructs. The constructs were operationalized by means of a combination of scales present in the Occupational Stress Inventory-Revised and the Genos Emotional Intelligence Inventory.

The study sample included 47 North Carolina community college presidents, for an overall response rate of 81%. The study hypothesis was tested with multiple regression analysis by regressing seven subscales of emotional intelligence on three subscales of occupational stress-coping resources. It was determined that out of the seven subscales of emotional intelligence only three did not emerge as significant independent variables affecting the subscales of coping resources. Therefore, it can be concluded that a significant positive relationship exists between the emotional intelligence of the North Carolina Community college presidents and their occupational stress-coping resources.

This study has implications for the incorporation of emotional intelligence training in presidential preparation forums, in the education of standing presidents, and for presidential selection processes.

STRESS MANAGEMENT OF NORTH CAROLINA COMMUNITY COLLEGE PRESIDENTS: THE INFLUENCE OF EMOTIONAL INTELLIGENCE

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STRESS MANAGEMENT OF NORTH CAROLINA COMMUNITY COLLEGE PRESIDENTS: THE INFLUENCE OF EMOTIONAL INTELLIGENCE

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CHAPTER 1: INTRODUCTION

In recent years, the higher education system has been the target of widespread scrutiny and criticism (Alonso, 2010; Arum & Roksa, 2011; Evelyn, 2003; Kelderman, 2010). Against this backdrop, it is not surprising that there are alarming statements in the literature about a growing pervasiveness of stress experienced by college presidents (Dawson, 2004; Furest, 2007; Mittman, 2009; Royal, 2006). The potential negative repercussion on higher education is even more disturbing as it has been reported that stress experienced by college presidents ultimately affects the learning environment and interferes with achievement of organizational goals (Mittman, 2009; Mohammadyfar, Khan, & Tamini, 2009).

Workplace factors called job stressors cause stress. Some job stressors relate to "the nature of a job and job tasks; others concern interpersonal relationships, such as conflicts with coworkers" (Spector, 2002, p. 133). Researchers have noted that people differ in their capability to govern their own emotions and to manage the emotions of others, and thereby handle stress (Salovey, Stroud, Woolery, & Epel, 2002). Attempts have been made to explain this divergence based upon personality traits and environmental variables (Chan, 1998; Griffin, 2001; Montgomery & Rupp, 2005). Others have attempted to explain the dissimilarity on demographic attributes such as age, race, and gender (Cohen, 1993).

While some studies suggest a correlation between and among these variables, other research indicates that the linkage is weak or not significant (Furnham, Petrides, Jackson, & Cotter, 2002). In the pursuit of strong predictors some investigators have focused attention on the emotional intelligence construct (Ciarrochi, Deane, & Anderson, 2002; Dulewicz & Higgs, 2000; Fox & Spector, 2000; Jordan, Ashkanasy, Hartel, & Hooper, 2002; Mikolajczak, Luminet, & Menil, 2006; Mikolajczak, Menil, & Luminet, 2007; Wong & Law,

2002). This research suggests that some people possess a larger capacity to manage their emotions, and to utilize them to guide their thoughts and behavior.

Statement of the Problem

Prior studies have appraised occupational stress in various higher education groups including; faculty (Bowden, 2000; Katsapis, 2008), academic deans (Carter, 1985; Sarros, Wolverton, Gmelch, & Wolverton, 1999), chief academic officers (Baker, 1988; Murray & Murray, 2000), and student affairs administrators (Violanti, 2007). This research focused much deserved attention on understanding stress, its magnitude, and its effects. Similar to the research conducted into the stress experience of college faculty and staff, there have also been investigations into the stress experience of college presidents. The results of these studies indicate that the college presidency is a highly stressful profession where frustrations and pressures are great, even to the extent where they may interfere with the president's ability to perform at a level that is acceptable to themselves and, in some cases, at a level that is acceptable to the institution (Melendez & de Guzman, 1983; Vaughn, 1986). Additionally, studies suggest that college presidents experience great personal loneliness while living under constant scrutiny, a factor which makes adaptive coping difficult (Kauffman, 1980). A study of college presidents conducted by Welt (1984) confirmed these findings. Welt sought to determine the perceptions of California community college presidents regarding job stress. His results suggest that college presidents experience significant job-related stress. In 1990, Cedillo replicated the Welt (1984) study. In this effort, Cedillo reaffirmed self-reported stress among California community college presidents and the associated adaptive coping challenges.

A small but expanding body of research indicates that emotional intelligence scores are accurate forecasters of physiological stress and psychological stress that are experienced in real

life (Ciarrochi et al., 2002; Mikolajczak et al., 2006; Mikolajczak et al., 2007; Slaski & Cartwright, 2002) and in empirical settings (Mikolajczak, Luminet, Leroy, & Roy, 2007). For example, recent studies conducted within the nursing profession indicate that nurses who possess high emotional intelligence experience less stress (Montes-Berges & Augusto, 2007). However, no studies were found that directly address the association between emotional intelligence and stress management, and none specifically address community college presidents.

Purpose of the Study

The focus of this study is the mitigating effect emotional intelligence may have on the stress experience of North Carolina community college presidents. The central thesis of this research is that high emotional intelligence facilitates stress management. The primary purpose of the study is to augment the body of knowledge about the relationship between these two constructs, within a select group of higher education leaders

Research Question

This research appraised the association between emotional intelligence and stress management. The following research question was explored: Among North Carolina community college presidents, is there a relationship between emotional intelligence and stress management?

Methodology

This section provides a brief description of the study design, including the data collection and data analysis process to be followed. A more comprehensive description of the study methodology is provided in Chapter 3.

Study Design

This quantitative study investigated the relationship between emotional intelligence and stress management of North Carolina community college presidents. The constructs of

emotional intelligence and stress management were operationalized by means of a combination of subscales found in the Genos Emotional Intelligence Inventory (Genos EI), and the Occupational Stress Inventory–Revised (OSI-R). The study incorporated a cross sectional, non-experimental survey research method that used descriptive and inferential statistics to investigate possible variable associations.

Data Collection

This study used two self-report measures, the Occupational Stress Inventory-Revised (OSI-R) and the Genos Emotional Intelligence Inventory (Genos EI), to collect emotional intelligence scores and stress management scores from the presidents in the North Carolina community college system. On-line collection of data was accomplished through the use of the Genos EI and the OSI-R in a single survey instrument. The following describes the two report measures:

The first instrument, the Genos EI (Concise Version), benchmarks the frequency with which individuals demonstrate emotionally intelligent workplace behavior. This assessment instrument is comprised of 31 items that employ a five-point Likert response scale which includes: 1 (Almost Never), 2 (Seldom), 3 (Sometimes), 4 (Usually), and 5 (Almost Always). The instrument takes approximately 10 minutes to complete. It renders seven emotional intelligence skill scores which include: "Emotional Self-Awareness (ESA), Emotional Expression (EE), Emotional Awareness of Others (EAO), Emotional Reasoning (ER), Emotional Self-Management (ESM), Emotional Management of Others (EAO), and Emotional Self-Control (ESC)" (Gignac, 2010, p. 2).

The second instrument, the OSI-R, measures three dimensions of occupational adjustment. These diminutions are (a) Occupational Stress, (b) Psychological Strain, and (c) Coping

Resources. Each of these dimensions contains subscales which measure attributes of an individual or his/her environment that represent important characteristics of occupational adjustment (Osipow, 1998). This study utilized only one of the three dimensions, Coping Resources. This dimension is measured by the Personal Resources Questionnaire which is comprised of four subscales, containing a total of 40 statements. This questionnaire asks participants to rate how well each of the statements fits them on a Likert scale ranging from 1, which indicates that the statement rarely or never describes them, to 5, which means that the statement describes them most of the time. The completion time for the Personal Resources Questionnaire is typically less than 10 minutes.

The Occupational Roles and the Psychological Strain dimensions of the OSI-R are not used in this study because the focus of this study is on stress management and its relationship to emotional intelligence. Additionally, reducing the number of questionnaire inventory items minimizes the time required for participants to complete the survey, thereby increasing the chance of obtaining a more acceptable response rate.

Data Analysis

Once the survey window expired, the inventory data were verified and then downloaded into a Microsoft Excel spreadsheet for import into the Statistical Package for the Social Sciences (SPSS; version 17) for analysis purposes. The database was stored at Sandhills Community College.

The researcher then employed a quantitative research method that provided a numeric description of the participants through the data collection process. Descriptive statistics were used to determine measures of central tendency for each variable. To test for relationships between study variables, regression analysis was conducted.

Significance of the Study

Although the occupational stress experience of community college presidents has been researched, further study is needed to identify associations that may facilitate adaptive coping. Examination of these associations is important because study results may expand the body of literature and research in the field of higher education leadership and organizational psychology. Further, establishing the relationship between these variables will contribute both theoretically and practically by: (a) contributing to the knowledge of occupational stress management of community college presidents so that they may maintain job effectiveness while preserving their health, emotional well being, and quality of life; (b) enabling organizations to identify appropriate selection processes for the hiring of chief executives; (c) providing individuals aspiring to community college presidency a better understanding of the emotional competencies needed to effectively manage stress; (d) identifying critical emotional intelligence skills for future leaders which would assist in developing leadership training programs that would promote emotional intelligence as a coping skill against stress, thus improving job satisfaction and organizational commitment; (e) providing information related to presidential mentoring of subordinates who aspire to be college presidents regarding emotional leadership and the occupational stress management process; and (f) supporting the work of other researchers who have examined the areas of occupational stress and emotional intelligence by extending the validation of the Genos-EI and the OSI-R to the community college population.

Operational Definitions

The definition of terms is a critical component of any research effort. Therefore, operational definitions which give context and meaning to this study, are provided in Appendix A.

Organization of the Study

This chapter provides a summary of the study context, statement of the problem, description of the study, the study design, and data collection procedures

Chapter 2 of the study reviews theoretical and empirical literature in the area of emotional intelligence, occupational stress, and adaptive coping. The construct of emotional intelligence was reviewed, from its conceptualization to the multiple theories and measures which currently exist. Next, the causes and the effects of occupational stress were considered. A discussion about emotional intelligence and its potential effect on adaptive coping follows. Finally, the rationale for exploring this relationship is offered. Chapter 3 provides information on the methodology, including the overall research strategy, rationale, study population, data collection management and analysis methods, and the ethical protection of participants. Chapter 4 reports the outcome of the statistical analyses that were conducted to appraise the emotional intelligence and adaptive coping relationship. Study findings, conclusions, implications, and suggestions for additional research areas are presented in Chapter 5.

CHAPTER 2: REVIEW OF LITERATURE

Introduction

Today's community colleges face a myriad of challenges including: enrollment surge, fiscal retrenchment, intense scrutiny, and rigid accountability. Exacerbated by the lagging economy, these challenges induce stress on all college personnel, but on no one more than college presidents. In this environment, the leadership burden is great because faculty and staff look to the president to provide leadership, assurance, and vision. It is the president's responsibility to guide the organization through difficult times. This emotional stewardship is foremost among the many leadership tasks needed to prevent organizational decline (Hopkins, O'Neil, & Williams, 2007). Stated simply, leaders must be able to sway emotions in others while managing their own (Goleman, Boyatzis, & McKee, 2002). When college presidents encourage and enable positive emotions, they bring out the best in people, but if they foster negative emotions, dissonance results, undermining the emotional foundation that is needed for people and their organizations to excel.

Under this sort of pressure, college presidents inevitably experience enormous stress which can negatively impact personal and organizational health. The literature suggests that emotional intelligence may be key to stress management (Austin, Saklofske, & Eagan, 2005; Gardner, 2005). It is therefore fitting to study emotional intelligence relative to stress management in order to discern potential relationships between the two.

Emotional Intelligence

Emotional intelligence is a comprehensive construct that encompasses a collection of individual skills (Goleman, 1995), aptitudes (Mayer & Salovey, 1997), and a synthesis of the two (Roberts, Zeidner, & Matthews, 2001). Matthews, Zeidner, and Roberts (2002) state that

emotional intelligence is “the competence to identify and express emotions, understand emotions, assimilate emotions in thought, and regulate both positive and negative emotions in the self and in others” (p. 3). As such, it raises the notion that emotions affect leadership and the performance of organization leaders. Authors such as Cote and Miners (2006), Gardner (1999), McDowelle and Buckner (2002), Rahim et al. (2002), and Snuggs (2006) support this notion. They opine that leaders who possess high emotional intelligence are more productive and successful, and can help others become more productive and successful as well. Other authors, such as Gardner (2005), Lazarus (1999), and Mayer and Salovey (1993), hold that emotional intelligence competencies, such as adaptation, are key to success as it moderates the negative aspects of occupational stress and facilitates adaptive coping.

The genesis of the emotional intelligence construct occurred in the 1920s when researchers such as Thorndike (1920) suggested that non-cognitive abilities, such as memory and problem solving, help explain human intelligence. The emotional intelligence construct is in part grounded in Thorndike's notion of “social intelligence” which he described in terms of the capacity manage other people with “an ability to understand others and act wisely in human relations” (p. 187). Later in 1943, Wechsler amplified Thorndike’s construct by introducing what he called “non-intellective” and “intellective” components to describe personal and social elements that are associated with human intelligence.

It is generally held that most contemporary emotional intelligence theory flows from the work of Gardner (1983). Although Gardner never used the term “emotional intelligence”, his theory of multiple intelligences, and his connotation of “intrapersonal intelligence” and “interpersonal intelligence”, formed the foundation for later models (Mavroveli, Petrides, Rieffe, & Bakker, 2007). Gardner’s conceptualization involved emotional self awareness and an

awareness of others emotions. This awareness was presumed to guide one's self conduct (Cherniss, 2000; Singh, Singh, & Singh, 2009; Trabun, 2002).

Salovey and Mayer (1990), building upon Gardner's work, proposed the first emotional intelligence theory in which they described emotional intelligence as an "ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and actions" (p. 189). In 1997, these authors refined their depiction of emotional intelligence then they suggested that emotional intelligence is the process included in "recognition, use, understanding, and management of one's own and others' emotional states to solve emotion-laden problems and to regulate behavior" (Salovey, Brackett, & Mayer, 2004, p. *i*.) They viewed emotional intelligence as a collection of mental, or cognitive, abilities pertaining to "(a) accurately perceiving and expressing emotion, (b) using emotion to facilitate cognitive activities, (c) understanding emotions, and (d) managing emotions for both emotional and personal growth" (Salovey et al., 2004, p. ii). Based on the conviction that emotional information is processed differently from non-emotional information, they developed an ability-based construct that helped to establish emotional intelligence as a distinct element of human intelligence.

Goleman (1995) helped the emotional intelligence construct to gain traction in popular literature. In his book entitled *Emotional Intelligence*, he depicted emotional intelligence as a group of management principles and character traits that may be employed by organization managers. Subsequently, the emotional intelligence construct gained momentum in general management and industrial psychology literature (Dulewicz, 2000; George, 2000; Palmer, Walls, Burgess, & Stough, 2001).

In 2005, Austin et al. were among the first to associate emotional intelligence with organizational stress. They opined that the process and outcomes of emotional intelligence can reduce stress for managers, and therefore organizations, by moderating conflict, promoting understanding and relationships, and fostering stability, continuity, and harmony. Additionally, an emotional intelligence deficit was believed to be connected to stress-induced alcohol abuse and health problems. The implication being that negative outcomes result from low emotional intelligence and positive outcomes result from high emotional intelligence.

Conceptualization

Following the introduction of the emotional intelligence paradigm, numerous theorists and practitioners have worked to refine the concept and to establish its reliability and validity (Boyatzis, Goleman, & Rhee, 2000). However, three groups of theorists, Mayer and Salovey, Bar-On, and Goleman, are cited in the literature as prominent in this endeavor. According to Mayer, Caruso, and Salovey (2000), these theorists offer a model of emotional intelligence that is differentiated by the approach they employ. Two of the three can be categorized trait models, while the other is described as an ability model (Mayer, Salovey, & Caruso, 2000). The following paragraphs describe these models and provide a description of their associated measures. Additionally, the models summarized in Table 1.

In 1997, Mayer and Salovey proposed an approach that has generated the most research published in peer reviewed journals (Fernández-Berrocal & Extremera, 2006). As summarized in Table 2, this approach has four dimensions and posits emotional intelligence to be a mental ability (Gardner, 2005). Regarding that view, Mayer and Salovey (1993) stated that emotional intelligence "involves the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand

Table 1

Models of Emotional Intelligence

Theorist	Type	Definition	Test	Test Method	Approach	Related to
Mayer & Salovey (1997)	Ability	Emotional intelligence involves the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth.	Multifactor Emotional Intelligence Scale (MEIS)	Ability Measure of Emotional Intelligence	Intellectual abilities using emotional information (e.g., emotion identification)	Models of general, or standard, intelligence.

Table 1 (continued)

Bar-On (1997)	Mixed (or Trait)	Emotional intelligence is an array of non-cognitive abilities, competencies, and skills that influence one's ability to succeed in coping with environmental demands and pressures.	Bar-On EQ-i	Self Report of Emotionally-intelligent behavior	Traits related to adaptation and coping (e.g., assertiveness)	Models of personality and dispositional traits.
Goleman (1998/ 2001)	Mixed (or Trait)	Emotional intelligence involves abilities which include self-control, zeal, and persistence, and the ability to motivate oneself.	Emotional Competency Inventory (ECI)	Observer/Self of Competencies	Acquired skills and competencies underlying effective leadership (e.g., influence)	Leadership competency models.

Table 2

Mayer and Salovey's 1997 Model of Emotional Intelligence

Emotional Intelligence Dimension	Emotional Abilities
Perception, appraisal and expression of emotion	The accuracy with which individuals can identify emotions and emotional content
Emotional facilitation of thinking	Describes emotional events that assist intellectual processing
Understanding and analyzing emotions and employing emotional knowledge	The ability to recognize, label and interpret emotions
Reflective regulation of emotions to promote emotional and intellectual growth	Conscious, reflective regulation of emotions to enhance growth

Note. (Gardner, 2005, p. 31).

emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth" (p. 10). These theorists suggest that people possess varying emotional self awareness and emotional awareness of others. They opine that people possessing high emotional intelligence are more in touch with their own emotions and the emotions of others and are therefore better equipped to manage those emotions.

Caruso, Mayer, and Salovey (2000) noted that the Mayer and Salovey ability model considers emotional intelligence to be "a special class of mental attributes or cognitive capacities that are separate from traits" (p. 5). This does not suggest that Mayer and Salovey disagree with the pertinence of traits; instead, they view traits as a consequence of emotional intelligence. According to Caruso et al. (2000), the Mayer and Salovey ability model "does not focus on personality traits or dispositions, per se, except as a product of having these underlying skills" (p. 4).

Caruso et al. (2000) posit that the Mayer and Salovey ability model is incomplete as it fails to incorporate the effects of emotional intelligence. Therefore, it is unlikely to attain an equivalent level of prediction as other well known models. Another criticism of the Mayer and Salovey ability model is that while it correlates moderately with IQ and academic achievement it lacks correlation with personality dimensions (Lopes, Salovey, & Straus, 2003).

In contrast to the Mayer and Salovey ability model, Goleman advanced a trait model of emotional intelligence that includes non-cognitive competencies. In 1995, Goleman described emotional intelligence as subsuming "self-control, zeal and persistence, and the ability to motivate oneself, and to control impulse and delay gratification"; and the quality of "keeping distress from swamping the ability to think; to empathize and to hope" (p. 34). Subsequently, in 1998, Goleman refined his depiction of emotional intelligence to "the capacity for recognizing

our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and our relationships" (p. 317). At the time he proclaimed emotional intelligence to be the strongest forecaster of workplace success.

Goleman's 1998 study expanded Mayer and Salovey's 1997 interpretation of emotional intelligence by adding "personal and social competencies". In doing so Goleman specified five emotional intelligence dimensions and twenty five emotional intelligence competencies. These dimensions and competencies are summarized and are presented in Table 3. Gardner (2005) opined that "Goleman's conceptualization of EI closely parallels the earlier ideas of social intelligence (Thorndike, 1920) and personal intelligence (Gardner, 1983); however, it departs significantly from Salovey and Mayer's ability model" (Gardner, 1983, p. 32).

In 2001 Goleman further refined his emotional intelligence model by collapsing the 25 capabilities into 20, as well as reducing the initial five dimensions into four. Goleman's 2001 model of emotional intelligence is shown in Table 4.

In 1997, Bar-On offered his concept of emotional intelligence. At that time, he conceived emotional intelligence to be a collection of personality traits and abilities that can predict one's emotional and social adaptation. He defined it as a "cross section of interrelated emotional and social competencies, skills and facilitators that determine how effectively we understand and express ourselves, understand others, relate with them, and cope with daily demands" (Bar-On, 2000, p. 3). At that time, Bar-On identified five key emotional intelligence competencies: interpersonal skills, intrapersonal skills, adaptability, stress management and general mood.

In 2000, Bar-On stated that "emotional and social intelligence is a multi-factorial array of interrelated emotional, personal, and social attributes that influence our overall ability to

Table 3

Goleman's 1998 Model of Emotional Intelligence

Emotional Intelligence Dimension	Emotional Competencies
Personal Competencies:	
Self-awareness	Emotional awareness, accurate self-assessment and self-confidence
Self-regulation	Self-control, trustworthiness, conscientiousness, adaptability and innovation
Motivation	Achievement drive, commitment, initiative and optimism
Social Competencies:	
Empathy	Understanding others, developing others, service orientation, leveraging diversity and political awareness
Social skills	Influence, communication, conflict management, leadership, change catalyst, building bonds, collaboration and cooperation and team capabilities

Note. (Gardner, 2005, p. 32).

Table 4

Goleman's 2001 Model of Emotional Intelligence

Emotional Intelligence Dimension	Emotional Competencies
Personal Competencies:	
Self-awareness	Emotional awareness, accurate self-assessment and self-confidence
Self-management	Self-control, trustworthiness, conscientiousness, adaptability, achievement drive and initiative
Social Competencies:	
Social awareness	Empathy, service orientation and organizational awareness
Relationship management	Developing others, influence, communication, conflict management, leadership, change catalyst, building bonds and teamwork and collaboration

Note. (Gardner, 2005, p. 33).

actively and effectively cope with daily demands and pressures" (p. 385). The five dimensions of Bar-On's 1997 model are detailed in Table 5.

Gardner (2005) opines that Bar-On's model is a trait approach which is more closely affiliated with the Goleman (2001) model than with the Mayer and Salovey (1997) model. Petrides and Furnham (2000, 2001) suggest that substantial differences exist between the ability and trait models. As previously noted trait emotional intelligence is concerned with behavioral dispositions and self-perceived abilities, and it is assessed through the use of self-report instruments, compared to ability emotional intelligence which is concerned with emotion related abilities, and is assessed through performance instruments. Trait emotional intelligence is also concerned with personality hierarchies, while ability emotional intelligence is concerned with cognitive ability hierarchies (Petrides & Furnham, 2000; 2001). These researchers out that the trait emotional intelligence construct is distinctly different, both methodologically and empirically, from the ability emotional intelligence construct. The research findings of O'Connor and Little (2003) and Warwick and Nettelbeck (2004) reveal low correlations between the two approaches, thereby supporting the Petrides & Furnham contention.

Instrumentation

Although empirical investigation of the emotional intelligence construct is relatively new, the literature contains numerous assessment instruments for its measurement (MacCann, Roberts, Matthews, & Zeidner, 2004). However, according to MacCann et al. (2004), all instruments have one of two approaches in common. The first approach is based upon a cognitive view of emotional intelligence suggesting an alignment with ability models. The four-branch hierarchical structure of emotional intelligence, empirically measured by the Mayer, Salovey, and Caruso Emotional Intelligence Test (MSCEIT) (Mayer, Salovey, Caruso, &

Table 5

Bar-On's 1997 Model of Emotional Intelligence

Emotional Intelligence Dimension	Emotional Competencies
Intrapersonal skills	Being aware of and understanding oneself and one's emotions, expressing one's feelings and ideas
Interpersonal skills	Being aware of, understanding and appreciating other's feelings, establishing and maintaining satisfying relationships with others
Adaptability	Verifying feelings with external cues, sizing up immediate situations, being flexible in altering feelings and thoughts with changing situations and problem solving
Stress management	Coping with stress and controlling impulses
General mood	Being optimistic and being able to feel and express positive emotions

Note. (Gardner, 2005, p. 35).

Sitarenios, 2003) and the Multifactor Emotional Intelligence Scale (MEIS) (Mayer, Salovey, & Caruso, 1997) are examples of this approach.

The other approach relies upon self-report techniques, which assumes emotional intelligence to be dispositional, and represented by a collection of cognitive, personality, motivational, and affective attributes. Self-report measures advise participants to respond to a battery of explicative statements regarding the extent they describe, or do not describe, themselves. Therefore, these instruments rely on the self perception of the respondent. If the individual's self concept is accurate, then this measure accurately assesses the respondent's emotional intelligence (Bailie & Ekermans, 2006). The Bar-On Emotional Quotient Inventory (EQ-I)(Bar-On, 1997) and the Goleman Emotional Competence Inventory (ECI)(Goleman, 1998) are primary examples of approaches that incorporate this framework. Both of these approaches have strengths and weaknesses. This study employs a self-report instrument, called the Genos Emotional Intelligence Inventory (Genos EI).

As previously stated, there are a variety of inventories designed to assess emotional intelligence. However, most of these measures are general in nature and as such are of limited value to this study because they do not specifically address workplace emotions. According to Gardner (2005), "it is reasonable to assume that workplace emotions may significantly differ from emotional displays in personal and family lives" (p. 27). Therefore, the Genos EI is employed by this study because it is a measure of emotionally intelligent behavior that was specifically designed for a workplace setting, and therefore possesses workplace relevance.

Because the Genos EI Inventory was developed specifically to assess workplace emotions, it possesses face validly that other instruments do not possess. This face validity provides a frame of reference that respondents can relate to when completing the inventory (Palmer, Stough, Hamer, & Gignac, in press). Additionally, a body of research supports the

Genos EI Inventory, in that several empirical studies have confirmed its reliability and validity. Also, the time required to complete the survey is less than most other instruments, making it more appropriate for this study. The completion time for the Genos EI Inventory (Concise Form) is 10 minutes, which is significantly less than the Bar-On EQ-i, which requires 45 minutes to complete.

Goleman's emotional intelligence construct provides the theoretical base for the Genos EI Inventory. It can be administered as either multi-rater or self-report, and it is applicable to male and female adults 18 years of age and older. The instrument asks participants to indicate how often a behavior is demonstrated. The 31-item inventory incorporates a spectrum of emotions, both positive and negative. Positive emotions, such as "satisfaction, enthusiasm, optimism, excitement, engagement, motivation, and feeling valued by colleagues" are included (Palmer, Gignac, Ekermans & Stough, in press, p. 13). Negative emotions, such as anxiety, anger, stress, annoyance, frustration, disappointment, impatience, and feelings of alienation, are also included (Bailie & Ekermans, 2006).

The Genos EI Inventory is comprised of seven subscales that are based upon the Swinburne University Emotional Intelligence Test. Table 6 describes the subscales and the workplace outcomes that are derived from the subscale skills.

The Genos EI Inventory, compared to better known models, is uniquely simple. Palmer, Gignac, Ekermans, and Stough, (in press) posit that "this feature makes the Genos model of EI more straightforward to debrief, easier for participants to recall whilst undertaking their daily work, and easier to link to other organizational competency models" (p. 10). Additionally, it possesses high workplace validity because it is comprised of items that are associated with workplace behaviors. Palmer, Gignac, Ekermans, and Stough (in press) state that "these features

Table 6

The Genos EI Inventory – Key Areas Measured

EI Skill	Definition	Workplace Outcomes
Emotional Self-Awareness (ESA)	The skill of perceiving and understanding your own emotions.	*The capacity to identify and understand the impact one's own feelings are having on thoughts, decisions, behavior and performance at work. *Greater self-awareness.
Emotional Expression (EE)	The skill of effectively expressing your own emotions.	*Creating greater understanding amongst colleagues about yourself *Creating trust and perceptions of genuineness amongst colleagues
Emotional Awareness of Others (EAO)	The skill of perceiving and understanding others' emotions.	*Greater understanding of others, how to engage, respond, motivate and connect with them *Interpersonal effectiveness
Emotional Reasoning (ER)	The skill of using emotional information in decision making.	*Enhanced decision-making where more information is considered in the process *Greater buy-in from others into decisions that are made
Emotional Self-Management (ESM)	The skill of managing your own emotions.	*Improved job satisfaction and engagement *Improved ability to cope with high work demands *Greater interpersonal effectiveness *Enhanced productivity and performance
Emotional Management of Others (EMO)	The skill of positively influencing the emotions of others.	*The capacity to generate greater productivity and performance from others *The capacity to generate a positive and satisfying work environment for others *The capacity to effectively deal with workplace conflict

Table 6 (continued)

Emotional Self-Control (ESC)	The skill of effectively controlling your own strong emotions.	*Emotional well-being *The capacity to think clearly in stressful situations *The capacity to deal effectively with situations that cause strong emotions

Note. Consortium for Research on Emotional Intelligence in Organizations, Retrieved from: http://eiconsortium.org/measures/genos.html

help participants undertaking Genos EI Inventory to: (1) understand the 'why' of what they are being asked to complete, which in turn creates greater participant buy in not only for completing the assessment but also the broader development oriented program it may be embedded within; and (2) appreciate the potential value of the information provided by the results of the inventory" (p. 11).

Stress and Stress Management

Conceptualization

Stress-related research began as early as 1932 when Cannon called stress the 'emergency reaction' and labeled the response it generates as 'fight or flight'. Selye (1974; 1976) pioneered efforts to scientifically explain physiological reactions to stress when he developed a three phase model called the General Adaptive Syndrome Model.

The first phase of the model is alarm wherein a stressor triggers an individual's shock and defense mechanism. The second phase of the model is resistance, wherein a person attempts to cope, strains, experiences distress, and is exposed to physiological risks. The last phase of the model is physiological fatigue. This phase takes place when a person's resistance fails. It consequently results in physical breakdown (see Figure 1).

Selye's work was criticized for ignoring the psychological implications of stress, such as one's capability to alter a stressful situation, after it is recognized as such (Cartwright & Cooper, 1997). Later, more inclusive stress theories emerged which emphasized the relationship between a person and their environment. One such theoretical framework is the Person-Environment (P-E) fit model (Gardner, 2005; Spielberger & Vagg, 1999).

The origins of the P-E fit model have been attributed to Lewin (1935) who asserted that human behavior results from of one's personality and their environment. Refined by Harrison

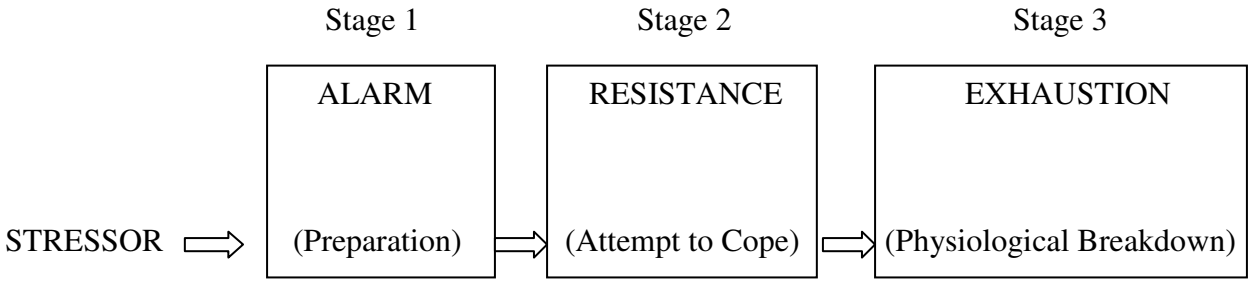

Figure 1. Selye's General Adaptive Syndrome Model of Stress.

Note. (Royal, 2006, p. 16).

(1978), this model suggests that a good person-environment "fit" results in positive behaviors. Conversely, a bad person-environment "fit" results in negative behaviors. This framework suggests that when a disparity exists between the reality of one's environment and one's perceptions of that environment, stress will occur.

Another model, called the Transactional Stress Model (TSM), is closely associated with Lewin's P-E fit model. Similar to the P-E fit model, the TSM focuses on the relationship between the individual and their environment. It provides a frame of reference for coping with stressful events. It suggests that transactions link individuals to their environment, and stress results when these transactions are judged to be too demanding or difficult, such as going beyond one's resources, thereby putting one's well being in jeopardy (Cooper, Dewe, & O'Driscoll, 2001).

In the TSM, Lazarus (1966) identified three appraisal stages in acknowledgment and cognitive processing of stress perceptions. He labeled these stages primary appraisal, secondary appraisal, and reappraisal. Figure 2 depicts the relationship between these stages. In the first stage, primary appraisal, an individual cognitively perceives an event, or situation, to be stressful and that it may impact one's well-being. The components of this stage include goal relevance, goal congruence or incongruence, and ego involvement. In the next stage, secondary appraisal, the individual recognizes the need for the selection of a response to the stressor, and then determines whether he or she can cope with that stressor. The individual considers available coping options in order to mitigate harm or rectify the situation. The next stage includes blame or credit, assessment of adaptive coping potential, and formation of future expectations. In the final stage, reappraisal, the individual assesses the stressfulness of the situation once again. The

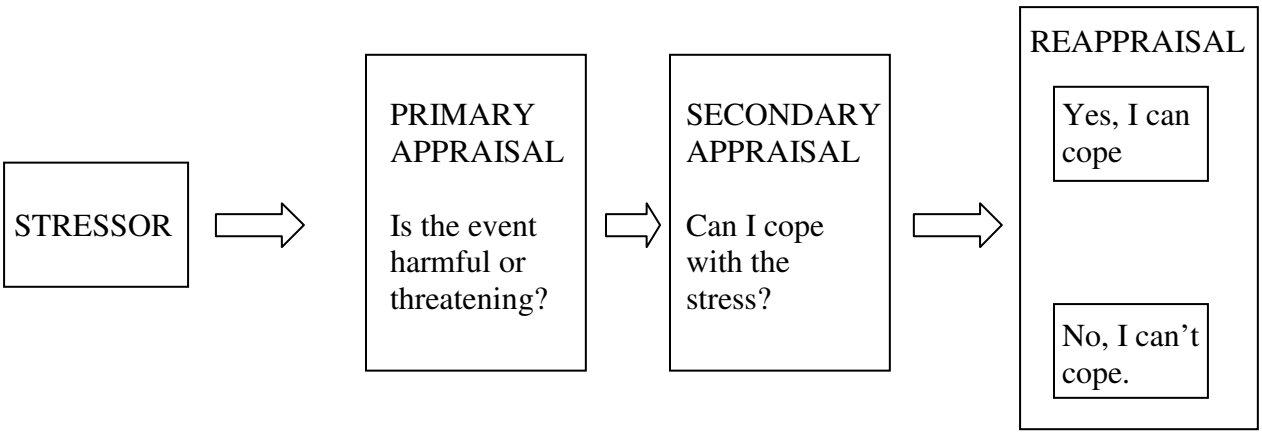

Figure 2. Lazarus' Model of Stress and Coping.

ever-changing environment creates a need for feedback and subsequent evaluation of coping measures (Lazarus, 1991).

Occupational Stress

In an organizational context, the term "occupational stress" is often used interchangeably with the terms "job stress" and "work stress" (AbuAlRub, 2004; Larson, 2004). The P-E fit model and TSM are useful frameworks for understanding job-related stress. The theories behind these models are consistent with several other stress theories which similarly suggest that stress is subjective, and it involves perceived job demands and one's perceived ability to manage those demands, which can produce psychological or physical strain (Harrison, 1978). Other occupational stress theories that embrace this framework include: the Demands Control Theory (Karasek, 1979), the Effort Rewards Imbalance Theory (Siegrist, 1996), the Job Demands Resources Theory (Bakker, Demerouti, De Boer, & Schaufeli, 2003), the Emotion-Centered Model (Spector & Goh, 2001), the Physical Stress Model (Muller & Malef, 2002) and the Cognitive Arousal Theory (Ursin & Eriksen, 2004).

Karasek's (1979) Demands Control theory views the determinate of stress to be the interplay between job demands and control. This model suggests that stress results when high job demands are paired with low control. Karasek defines job demands as an independent variable that impacts stress. He defines job control as one's decision-making latitude over tasks and conduct while at work. According to this theory, a demanding job should not be stressful if one possesses a high level of job control, or autonomy. Therefore, stress occurs in a job environment that combines high demand and low control (Karasek & Thorell, 1990).

In comparison, the Siegrist (1996) Effort Rewards Imbalance Theory emphasizes the give-and-take effort and reward structure of work. He hypothesized that work-related stress is

dependent upon the give and take exchange between work effort and work reward. Siegrist defined work effort as job demands and obligations that are placed upon an employee. He defined rewards as salary, job security, and career advancement opportunities, which are provided by the employer. This theory suggests that when work is characterized by high effort and low reward there is an imbalance between costs and benefits. This imbalance, or inequity, causes stress, which may result in psychological and/or physiological ill-health. Unlike the Job Demands Control Theory, the Effort Rewards Imbalance Theory considers both job conditions and personal factors of the work environment.

The Job Demands Resources Theory (Bakker et al., 2003) suggests that job stress ultimately results in burnout. In this context, burnout is described as a psychological response to job stressors of a chronic nature. According to this framework, work environment characteristics fall into one of two categories: demands or resources. The framework depicts job demands as social, physical, psychological, or organizational aspects that require sustained cognitive and emotional effort, that result in psychological and physical expenditures. Job resources are characteristics that are fundamental to the achievement of work goals, reducing job demands, or advancement of personal development. As with other job stress theories, the Job Demands Resources theory suggests that occupational stress results from the interplay between a person and his or her job environment (Gardner, 2005).

The Cannon-Bard Theory of Emotion (Cannon, 1932) contends that physiological stress may be simultaneous with psychological stress. Mueller and Maluf's (2002) Physical Stress Theory suggests that a change in physiological stress level will result in a predictable adaptive physiological response. For example, a person who routinely reduces his or her physical stress will experience a positive biological benefit.

The Cognitive Arousal Theory of Stress (Ursin & Eriksen, 2004) states that a person's inability to cope with stressful situations can lead to feelings of hopelessness and helplessness, and may reduce emotional health. This situation can potentially cause one to develop feelings of frustration, deprivation, or discontent, such as job dissatisfaction.

Bandura's 1977, Efficacy Theory of emotions and stress suggests that high self efficacy, that is, the belief in one's ability to carry out a favorable plan and control emotions, will decrease job stress, increase emotional health, and lower psychological stress.

Stress Management

In this study, the terms 'coping' and 'adaptive coping' are used interchangeably with the term 'stress management'. Lazarus and Folkman (1984) describe coping as "cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141). They also describe coping as "realistic and flexible thoughts and acts that solve problems and thereby reduce stress" (Lazarus & Folkman, 1984, p. 118). Cox (1985) views coping as a form of problem-solving behavior, while stress is the result of failed problem solving.

Salovey, Bedell, Detweiler, and Mayer (1999) integrate the emotional intelligence and stress management constructs when they opine that coping is a response to negative emotions, which is influenced by one's emotional intelligence. They argue that emotionally intelligent people, who are aware of their own emotions, know how and when to express their emotions, and can effectively manage their moods. Research by Tugade and Frederickson (2004) and Ashkanasy, Ashton-James, and Jordan (2004) support this linkage. Their findings suggest that people who self manage their emotions engage in proactive adaptive coping by using humor, recreation, relaxation techniques, and positive thinking. Other authors, such as Folkman and

Moskowitz (2000), opine that stress can be moderated by positive emotions. They suggest that stress-management approaches, such as adaptive coping, are related to psychological wellbeing and good health.

Frederickson's (2001) Broaden-and-Build Theory provides insight into the emotional intelligence/stress management linkage. According to this construct, positive and negative emotions evoke distinct physiological effects. It contends that negative emotions compress one's thought/action repertoire by directing one's behavior in a specific way, for example attack when angry, or escape when afraid. In contrast, positive emotions, such as joy, contentment, or interest, broaden one's thought action repertoire, expanding one's range of cognitions and behaviors. These broadened mindsets, result in an expansion of one's physical, intellectual, and social resources (Tugade & Fredrickson, 2004).

The present research seeks to build upon the Broaden-and-Build Theory by suggesting a linkage between emotional intelligence and stress management. By examining this relationship, this study seeks to provide understanding about why some college presidents successfully manage stress, while others working in comparable circumstances do not make out as well. As proposed by the Broaden-and-Build theory, employment of positive emotions during stressful times will prompt individuals to adaptive thoughts and actions. Thus, emotionally intelligent leaders may possess coping resources that safeguard them, both psychologically and physiologically, from job-related stress.

Stress and Stress Management Among College Presidents

Although stress research is abundant, research that specifically addresses adaptive coping relative to the stress experience of college presidents' is nonexistent. The preponderance of existing literature related to college presidents focuses on the position and its demands. For

example, articles typically cite excessive work hours, the need to understand and address multiple, and often conflicting, stakeholder positions, and dealing with wide-ranging problems including academic, student life, financial constraints, and politics. The job's consuming nature competing with personal and family time is also frequently cited. The following paragraphs provide a summary of recent research related to the stress experience of community college presidents.

In 1986 Vaughan conducted research designed to determine if community college presidents recognized signs of stress in themselves. The researcher noted that the presidents identified their jobs as stressful, listing common symptoms such as apathy, intolerance, feeling of being stuck, and lethargy. Vaughan concluded that "stress comes not only from stressful situations but from how the individual perceives and deals with a given situation: one person's routine pressure may be another's stress. What is taken in stride at one time in a person's career may, at a different stage, become a stress producing crisis for the individual" (Vaughan, 1986, p. 134).

A dissertation by Furest (2007) evaluated the impact of perceived job stress of community college presidents' and their intention to remain in their positions. The researcher found a positive correlation between stress levels and voluntary job turnover.

Royal (2006) studied the impact of the stress experience of North Carolina community college presidents. The researcher administered self-report surveys to all North Carolina community college presidents. The study findings suggested that these presidents experience significant stress related to job pressures and demands.

A 2004 study by Dawson entitled, *The Relationship of S*tress *Levels to Wellness Practices Among Community C*ollege Presidents, studied the association between wellness practices and

self-reported job stress of the study population. The researcher found a significantly positive correlation between stress levels and wellness practices, suggesting that engagement in the recreation and physical activity resulted in a reduction in stress. As an aside the study also found that female community college presidents experience greater stress than their male counterparts. Additionally the study found more experienced presidents were less stressed than presidents with little tenure.

In 2009 Mittman conducted a study entitled, *The Phenomenon of S*tress *and Health Promoting Behaviors among C*ollege *and University Presidents: A Quantitative and Qualitative Analysis*, which evaluated self-reported job stress experienced by higher education presidents. The study profiled the study populations' health behaviors and appraised the relationship between those behaviors and self-reported job stress levels. Similar to the Dawson (2004) study, findings suggested a negative correlation between health behaviors and perceived stress.

A 1988 study conducted by Baker entitled *The T*wo- *and Four-year Chief Executive Officer in Public Higher Education: Perceived Sources of Stress, Degree of Distress, and Coping Strategies* sought to identify perceptions of selected two-year and four-year higher education chief executive officers as to the sources of stress associated with the presidency, and what, if any, coping strategies they have developed. The study identified eight primary sources of job stress. The top three were budget, state coordinating/governing agencies, and career conflict with spouse. The study noted that the study population was able to identify their primary sources of job stress in order to develop positive coping techniques.

Instrumentation

As previously discussed, stress is subjective, and a model is needed to provide information on its theoretical constructs (Jackson & Schuler, 1985). The OSI-R used in this

study is such a model. It assesses stress levels by incorporating variables that impact stress or outcomes of stressful situations (Hicks, Bahr, & Fujiwara, 2009). It is built upon established theoretical constructs, including the Person-Environment Fit model and the Transactional Stress Model. According to Osipow (1998), the OSI-R measures three domains of the stress process: occupational role, personal strain, and coping resources. Osipow (1998) states, "For each of these domains, subscales measure specific attributes of the environment or individual that represents important characteristics of occupational adjustment" (p. 1). According to Hicks et al. (2009), the OSI-R hypothesizes that job-related stress influences one's perceptions of work roles and that stress is influenced by the level of one's coping resources.

This study utilized one of the three dimensions of the OSI-R, which is the Coping Resources dimension. The coping resources dimension identifies the resources an individual has at their disposal to moderate the effects of stressors and to lessen strain. The Coping Resources dimension is measured by the Personal Strain Questionnaire. The rationale for modifying this instrument is detailed in chapter three. The dimension used in this study and its subscale descriptions are included in Table 7.

Summary

Stress is a multi-dimensional construct that can occur when one's physical and emotional competencies do not match, or are not cannot handle job demands or constraints (Leka, Griffiths, & Cox, 2004; Ugoji, 2003; Ugoji & Isele, 2009). Two types of stress may result from this mismatch, good stress from low to moderate stress levels and bad stress from high stress levels. Individuals who experience low to moderate stress levels may be able to meet job demands and maintain a healthy balance. Conversely, individuals who experience high stress levels may not be able to fulfill job demands which may result in negative physical consequences, and

Table 7

OSI-R Personal Coping Scale Descriptions

Subscale	Description
Recreation (RE)	High scorers may report that they take advantage of the recreational/leisure time coming to them and engage in a variety of activities that they find relaxing and satisfying. They may also report doing the things they most enjoy in their spare time.
Self-Care (SC)	High scorers may report that they regularly exercise, sleep eight hours per day, are careful about their diet, practice relaxation techniques, and avoid harmful substances (e.g., alcohol, drugs, tobacco, coffee).
Social Support (SS)	High scores may report feeling that there is at least one person they can count on, one who values and/or loves them. They may report having sympathetic people with whom to talk about work problems and may report having help to do important things and/or things around the house. They also may report feeling close to another individual.
Rational/Cognitive Coping (RC)	High scorers may report that they have a systematic approach to solving problems, think through the consequences of their choices, and are able to identify important elements of the problem encountered. They may report being able to set and follow priorities and having techniques to avoid being distracted. They also may report being able to re-examine and reorganize their work schedule. They put their jobs out of their minds when they go home and feel that there are other jobs besides their present on that they can do.

Note. (Osipow, 1998, p. 13).

organizational impacts may result (Fevre, Matheny, & Kolt, 2003; Leka et al., 2004; Millward, 2005; Newell, 2002; Sullivan & Bhagat, 1992).

Anxiety, depression, burnout, alienation, tension, anger, nervousness, irritability, and frustration are manifestations of job related psychological stress (Antoniou, Davidson, & Cooper, 2003; Millward, 2005). If not managed, this stress may negatively impact work attitudes and behavior (Newell, 2002; Seaward, 2005).

Occupational stress research indicates that stress does not affect everyone in the same way or to the same extent. Studies have identified individual differences in how individuals cope with stressful situations. It has been suggested that emotional intelligence promotes coping behavior. However, the extent and magnitude of this relationship has not been determined (Kafetsios & Zampetakis, 2008; Quoidah & Hansenne, 2009).

Integration of Emotional Intelligence and Stress Management Theory

Only a modicum of empirical research has been conducted on the potential link between emotional intelligence and stress management. However, the preceding section suggests that a nexus exists between these constructs. Theoretically, high emotional intelligence predicts stress management (Schutte, Malouff, Simunek, McKenley, & Hollander, 2002). That is, it is predicted that highly emotionally intelligent individuals manage stress more skillfully, which should contribute positively to psychological and physiological well-being.

According to Lazarus, Kanner, and Folkman (1980) positive emotions help one cope with stressful conditions in three ways: provide a breather, act as a sustainer, and act as a restorer. Likewise, Collins (2007) proposed that, "Positive emotions generate more flexibility, more creative, open thoughts and solutions and they are active ingredients in coping and thriving, in spite of adversity" (p. 2). Collins (2007) also suggests that "On-going emotional intelligence

leads to a build-up of a range of personal resources; physical, social, psychological and intellectual, that is durable and outlasts the transient state that led to their acquisition" (p. 3). Therefore, the literature suggests that repetitive positive emotions lead to coping that is a habitual personal resource (Frederickson, Tugade, Waugh, & Larkin, 2003).

Authors such as Salovey et al. (1999) claim that people with higher emotional intelligence successfully engage in adaptive coping because they "accurately perceive and appraise their emotional states, know how and when to express their feelings, and can effectively regulate their mood states" (p. 161). Similarly, Bar-On (1997) embraces "stress management" and "adaptability" as two significant components of emotional intelligence. Additionally, the emotional intelligence literature of Epstein (1998) and Salovey et al. (1999) suggest a number of reasons why emotionally intelligent individuals would be expected to experience less stress. These theorists also claim that high emotional intelligence allows one to cope more adaptively once stress is experienced.

Matthews et al. (2002) delineated eight moderating factors: avoidance of stress conditions, rich coping resources, self-efficacy for emotional regulation, constructive perceptions and situational appraisals, repair and regulation of emotions, emotional skills, use of effective coping strategies, and competence in coping that may form a nexus between emotional intelligence and adaptive coping.

Overall, the literature suggests that emotional intelligence may work through a host of personal factors to impact stress and adaptive coping to stress. As cited in Matthews et al., the following factors may be moderated by the emotional intelligence/coping relationship.

1. Avoidance of stressful conditions. Individuals who possess high emotional intelligence create a less stressful environment for themselves by conducting their

lives in ways that produce fewer stressful events. Because emotionally intelligent individuals do not get themselves into stressful situations to begin with, they do not need to deplete as many adaptive resources in coping with stress in their lives.

2. Richer coping resources. Emotionally intelligent individuals have richer emotional coping resources compared to their less emotionally intelligent counterparts. Therefore, when emotionally intelligent individuals compare the demands or a stressful encounter vis-à-vis their perceived resources and competencies, they tend to assess the encounter as intrinsically less stressful. Emotional intelligence equips one with the necessary social skills required to build a solid and supportive social network. Social support is then accessed and utilized effectively in times of need.

3. Greater self-efficacy for emotion regulation. Persons high in emotional intelligence are said to possess greater self-efficacy with respect to regulation of emotions (Salovey, Woolery, & Mayer, 2001). Individuals with high emotional intelligence believe that they have the wherewithal to employ strategies necessary to repair negative moods caused by stressful conditions. According to this hypothesis, individuals who can clearly perceive their feelings and believe they can repair negative moods turn their resources toward coping and minimize the potentially harmful effects of stress.

4. Constructive perceptions and situational appraisals. Emotionally intelligent people find it easier to catch and identify faulty appraisals and correct misunderstandings. Furthermore, highly emotionally intelligent people interpret unavoidable stressful conditions in a more benign and a less stressful way,

tending to view them more as challenges instead of threats (Epstein, 1998). Additionally, individuals who make sense out of their feelings show greater rebound from induced negative mood compared to those low in emotional intelligence.

The emotional intelligence construct posits that individuals who have sufficient interpersonal and intrapersonal emotional competencies can better cope with job related stressors (Bar-On, 1997; Goleman, 1998, 2003; Salovey & Mayer, 1990, 1997). Specifically, Bar-On's (1997) model of emotional-social intelligence posits that the level of emotional intelligence will increase individuals' competencies and this may help them to decrease external demands and pressures, as well as increase well-being.

Salovey and Mayer's (1990, 1997) ability-based model of emotional intelligence explains that the level of emotional intelligence will increase one's competencies and can increase the individual's ability to decrease stress situations and increase positive individual attitudes and behaviors. Goleman's (1998, 2003) model of emotional intelligence suggests that emotional intelligence improves interpersonal and intrapersonal skills and adds to an individual's capability to cope with job-induced stress. An anticipated result of high emotional intelligence is better personal outcomes such as improved job satisfaction (Guleryuz, Guney, Aydin, & Asan, 2008; Kafetsios & Zampetakis, 2008; Sy, Tram, & O'hara, 2006).

Recent occupational stress studies support these contentions. Studies that examined various workplace populations, such as food service employees (Sy et al., 2006), nurses (Guleryuz et al., 2008; Quoidah & Hansenne, 2009), educators (Kafetsios & Zampetakis, 2008), and bankers (Obiyemi & Ibraheem, 2007), found that psychological and physiological stressors did not diminish satisfaction when workers effectively managed their emotions. Based upon

preceding occupational stress research, and emotional intelligence research, the model used in this study is shown in Figure 3.

Chapter Summary

A thorough understanding of the theory and research related to emotional intelligence and occupational stress management is critical to this study. Therefore, the preceding sections of this chapter reviewed literature related to these constructs. The following chapter details the methodology employed in this study. It includes the research question, hypothesis, and an explanation of the means of data collection and analysis. Next, Chapter 4 presents the study results. These results are discussed in Chapter 5 along with implications and recommendations for future research.

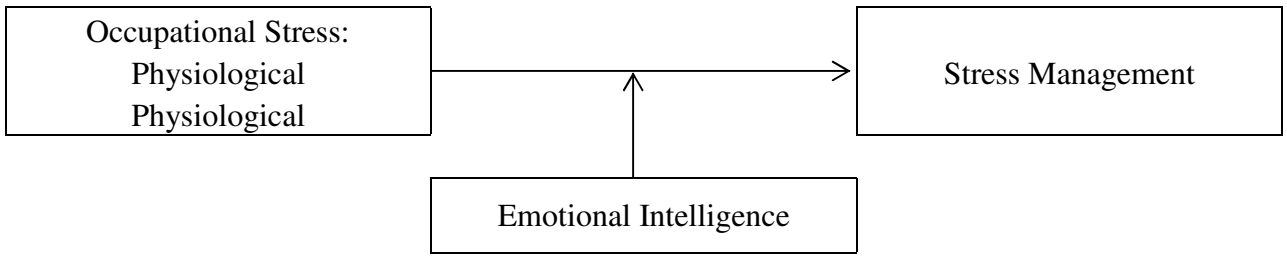

Figure 3. Moderating affect of emotional intelligence.

CHAPTER 3: METHODOLOGY

This chapter delineates the methodology employed in this study to explain the relationship between emotional intelligence and stress management of North Carolina community college presidents. In this study, the terms 'coping' and 'adaptive coping' are used interchangeably with the term 'stress management'. Topics in this chapter include: a summary of the research question; a description of the study participants; an explanation of the survey instruments; an explanation of study variables; a description of study objectives and null hypotheses; an account of the data analysis; a list of ethical considerations; a description of assumptions and limitations; and a chapter summary.

Research Question and Approach

Research indicates that personal well being, job satisfaction, and organizational commitment, decrease as a result of occupational stress (Gardner, 2005; Jepson & Forest, 2006; Oginska-Bulik, 2006; Spector, 2002). Furthermore, the literature suggests a linkage between stress management and emotional intelligence (Gardner, 2005; Jordan et al., 2002; Sahar-Khiz, 2010; Wong & Law, 2002). However, this linkage has not received much attention in organizational literature (Gardner, 2005). It is the intent of this study to address this gap by investigating the research question: Among North Carolina community college presidents, is there a relationship between stress management and emotional intelligence? Figure 4 provides the conceptual schema of the potential relationships between the variables associated with this research question.

The research approach of this study entailed a descriptive analysis aimed at quantitatively testing the relationship between emotional intelligence and stress management by utilizing instruments that are capable of measuring the related factors.

Figure 4. Conceptual schema of potential relationships between variables.

Study Participants

The population for this study was all 58 North Carolina community college presidents. Participation in this research was voluntary. The use of North Carolina community college presidents to populate the study is appropriate because North Carolina ranks third nationally in the number of community colleges and thus provides a significant number of relevant research participants. Additionally, North Carolina community colleges are diverse, consisting of institutions ranging from large urban to small rural that support student populations from 800 to 60,000.

Instrumentation

The survey package consisted of two instruments which collected information on emotionally intelligent behavior and adaptive coping resources of the participants. The following paragraphs describe the instruments employed in this study.

Genos Emotional Intelligence Inventory (Genos-EI)

The Genos EI Inventory is an instrument which measures the "frequency with which an individual exhibits emotionally intelligent behavior" (Gignac, 2010, p. 1). It is owned and distributed by Genos Pty Ltd. Copyright permission to use this instrument was obtained from the publisher (see Appendix B). For each inventory item, study participants are requested to indicate, using a five-point Likert scale ranging from 'Almost Never' to 'Almost Always', how often they demonstrate the behavior in question. Respondents are asked to answer each inventory item at an even speed and without excessive rumination. Higher scores denote greater emotional intelligence; conversely, lower scores suggest a lack of emotional intelligence. The reading level of the inventory items is a 7.4 grade level, based on a Flesch-Kincaid grade level

analysis (Flesch, 1948). Therefore, the Genos EI Inventory is applicable to workplace adults eighteen years of age or older.

The Genos EI Inventory (Concise Version) employed in this research study is a 31-item self-report measure which can be completed in 10 minutes or less. In addition to being shorter than the 70-item Genos EI Inventory full version, the primary difference is its lower subscale score reliability. Reliably levels of the Genos EI Inventory (Concise Version) are less than the full version, but they still exceed acceptable standards for research. The instrument produces seven subscale scores which include:

1. Emotional Self-Awareness (ESA)
2. Emotional Expression (EE)
3. Emotional Awareness of Others (EAO)
4. Emotional Reasoning (ER)
5. Emotional Self-Management (ESM)
6. Emotional Management of Others (EMO)
7. Emotional Self-Control

The scores of the questions in each of the seven subscales were aggregated for statistical analysis. Table 8 provides a list of the Genos EI Inventory subscales with an associated characteristic survey item. In the research context, the Genos Pty Ltd. the owner and distributor of the instrument, does not furnish a scoring key to researchers. Therefore, these studies responses were entered into a Microsoft Excel spreadsheet that was sent electronically to Genos Pty Ltd. for scoring.

Because this study used the Genos EI Inventory exclusively for research purposes, scores derived from the Genos EI inventory were aggregated for group level analyses, and because

Table 8

Genos EI Subscales and Characteristic Survey Items

Subscale name	Characteristic items
Emotional Self-Awareness (ESA)	Is aware when he/she is feeling negative at work. Is aware of how his/her feelings influence the way he/she responds to colleagues.
Emotional Expression (EE)	Expresses how he/she feels at the appropriate time. Expresses his/her feelings effectively when someone upsets him/her at work.
Emotional Awareness of Others (EAO)	Demonstrates an understanding of others' feelings at work. Understands the things that make people feel valued at work.
Emotional Reasoning (ER)	Asks others how they feel about different solutions when problem solving at work. Demonstrates to colleagues he/she has considered other's feeling in decisions he/she makes at work.
Emotional Self-Management (ESS)	Ruminates about things that anger him/her at work. *Responds to events that frustrate him/her at work effectively.
Emotional Management of Others (EMO)	Creates a positive working environment for others. Motivates others toward work-related goals.
Emotional Self-Control (ESC)	When under stress, he/she becomes impulsive. *Demonstrates excitement at work appropriately.

Note. * = negatively keyed items. (Palmer, Stough, Hamer, & Gignac, in press, pp. 11-12).

study participants were not debriefed about their results, researcher accreditation by the Genos EI Inventory accreditation program was not required.

The seven-factor model underlying the Genos EI Inventory has been validated in a confirmatory factor analytic investigation. Furthermore, the internal consistency and reliability of the Genos EI Inventory (Concise Form) are respectable, with subscale reliabilities ranging from .71 to .75 (Gignac, 2010). This level of reliability is considered to be sufficient for the variables used in this study. Table 9 provides the subscales that make up the Genos EI Inventory and their corresponding internal consistency, means, and standard deviations. The mean and standard deviations listed were calculated for the participants involved in the design of the instrument.

Occupational Stress Inventory- Revised (OSI-R)

The OSI-R is owned and distributed by Psychological Assessment Resources, Inc. Copyright permission to use the inventory and to modify the survey delivery method was been obtained (see Appendix C).

The OSI-R is a measure of work-related stress that is based on contemporary stress theories, including the P-E Fit theory (French, Rogers, & Cobb, 1974). It measures three dimensions of occupational adjustment: occupational stress, psychological strain, and coping resources. Each of the three dimensions contains several subscales which "measure specific attributes of the environment or individual that represent important characteristics of occupational adjustment" (Osipow, 1998, p. 1). As previously discussed, this study utilized only

Table 9

Genos EI Subscales and Measures (N = 4775)

Subscale name	Number of items	Cronbach's alpha (α)	Mean	SD
Emotional Self-Assessment (ESA)	4	0.75	16.60	4.79
Emotional Expression (EE)	5	0.72	18.89	8.59
Emotional Awareness of Others (EAO)	4	0.74	16.01	4.68
Emotional Reasoning (ER)	5	0.72	20.16	6.65
Emotional Self-Management (ESM)	5	0.74	18.65	7.94
Emotional Management of Others (EMO)	4	0.74	15.80	5.23
Emotional Self-Control (ESC)	4	0.71	15.75	5.89

Note. (Palmer, Stough, Hamer, & Gignac, in press, p. 114).

one of the three dimensions, Coping Resources. The purpose of the coping resources dimension is to identify the resources an individual has to fight the effects of stressors and to lessen strain. The Coping Resources dimension is measured by the Personal Strain Questionnaire.

The Personal Resources Questionnaire contains four subscales Recreation (RE), Self-Care (SC), Social Support (SS), and Rational/Cognitive Coping (RC), containing a total of 40 statements. Participants are asked to rate how well each of the 40 statements fits them on a scale from "1" which indicates that the statement rarely or never describes them to "5" which means that the statement describes them most of the time.

As previously discussed the Occupational Roles and the Psychological Strain dimensions of the OSI-R were not used because the intent of this research is to investigate possible correlations between emotional intelligence and coping resources. Therefore, only the Personal Resources Questionnaire was germane to this study. Additionally, a reduced number of items minimized the time required for participants to complete the survey, thereby increasing the chance of obtaining an acceptable response rate.

Table 10 provides a description of the coping resource subscales. Characteristic survey items are also provided.

The OSI-R is a well-established inventory with well-documented reliability and validity (Zhang, 2007). According to Osipow (1998), internal reliability (α) estimates range from the low .60s to the mid .80s. This level of reliability is considered to be sufficient for the formation of the variables used in this study.

Validity estimates for the inventory are high as well. Validity data are drawn from five major processes and sources, which include: "convergent validity studies, factor analyses, correlational studies of the relationships of the subscales to variables of practical and theoretical

Table 10

OSI-R Personal Coping Resources Subscale Descriptions and Characteristic Items

Subscale name	Description	Characteristic items
Recreation (RE)	Measures the extent to which the individual makes use of and derives pleasure and relaxation from regular recreational activities.	When I need a vacation, I take one.
Self-Care (SC)	Measures the extent to which the individual regularly engages in personal activities which reduce or alleviate chronic stress.	I get the sleep I need.
Social Support (SS)	Measures the extent to which the individual feels support and help from those around him/her.	I feel that I have at least one good friend that I can count on.
Rational/Cognitive Coping (RC)	Measures the extent to which the individual possesses and uses cognitive skills in the face of work-related stress.	When faced with a problem, I use a systematic approach.

Note. (Osipow, 1998, p. 2).

importance, studies using the subscales as outcome measures in stress reduction environments, and studies of the stress, strain and coping model allowing for comparisons of selected criterion groups" (Osipow, 1998, p. 24).

Variables

The survey instruments used contain four subscales associated with coping resources and seven subscales associated with emotional intelligence. Responses are summed to create continuous variables. The study variables are operationalized in Table 11.

Objectives and Hypotheses

The relationship between workplace emotional intelligence and adaptive coping was outlined in the two preceding chapters. The overall objective of this study was to examine the relationship between emotional intelligence and adaptive coping of North Carolina community college presidents. The following research hypothesis, stated in the null and alternate, pertaining to North Carolina community college presidents, was intended to explore these relationships.

$H_0 1$: Personal coping scale scores are independent of emotional intelligence scale scores.

Ha1: Personal coping scale scores are related to emotional intelligence scale scores.

Data Collection

In order to answer the research question, the survey instrument was deployed using a password-protected electronic survey system called Zoomerang, which can be accessed at www.zoomerang.com. The survey instrument contained two sections: the Genos EI inventory and the OSI-R Personal Resources questionnaire (see Appendix D). The survey was administered in four steps which included:

1. Acquisition. Approximately one week before the study began, a brief electronic invitation describing the intent of this research was sent to the 58 presidents in the

Table 11

Operationalized Study Variables

Subscale name	Variable	Operationalized	Source
Personal Resources Questionnaire			
Recreation (RE)	Dependent	Continuous	OSI-R (PRQ)
Self-Care (SC)	Dependent	Continuous	OSI-R (PRQ)
Social Support (SS)	Dependent	Continuous	OSI-R (PRQ)
Rational/Cognitive Coping (RC)	Dependent	Continuous	OSI-R (PRQ)
Emotional Intelligence			
Emotional Self-Awareness (ESA)	Independent	Continuous	Genos EI
Emotional Expression (EE)	Independent	Continuous	Genos EI
Emotional Awareness of Others (EAO)	Independent	Continuous	Genos EI
Emotional Reasoning (ER)	Independent	Continuous	Genos EI
Emotional Management of Others (EMO)	Independent	Continuous	Genos EI
Emotional Self-Control (ESC)	Independent	Continuous	Genos EI

North Carolina Community college system (see Appendix E). This electronic correspondence served to introduce the study and allow the researcher to determine the accuracy of the presidents' electronic mail addresses. Electronic mail addresses that returned undeliverable were corrected.

2. Administration. Agreeable presidents completed the survey following receipt of a second email which included: (a) an introduction of the research, containing the study purpose and the benefits to study participates, (b) a confidentiality statement, and (c) directions for accessing the survey along with the web link to the survey (see Appendix F).
3. Follow-up. Approximately one week after the study began, a second invitation was sent to presidents who had not completed the survey, encouraging their participation in the study (see Appendix G).
4. Closure. Upon completion of the project, the researcher sent an email expressing appreciation to all respondents and offered them the opportunity to review the results of the study when completed (see Appendix H).

Statistical Analysis

Survey responses were collected and stored in a database located at Sandhills Community College. When the survey window expired, the data was verified for entry errors and then downloaded into a Microsoft Excel spreadsheet and imported into the Statistical Package for the Social Sciences (SPSS; Version 17) for analysis.

In order to address the multiple dimensions of emotional intelligence and adaptive coping, the following data analysis steps were performed:

1. Internal reliability of scores. In order to justify aggregating subscale information it was necessary to verify the reliability of emotional intelligence and the occupational stress-coping resource subscale test scores. Cronbach's alpha was used to determine how well each subscale item correlated with the sum of the remaining items. It measured consistency among individual items in the subscale. Accordingly, Cronbach's alpha (α) was computed to insure that all reliability coefficients are within an acceptable range ($\alpha > .70$).
2. Exploratory analysis and descriptive statistics. Descriptive statistics were used to explore the data. Measures of central tendency and dispersion were generated in order to understand how responses were distributed. In order to validate normal distributions, histograms and boxplots were created to provide a visual representation of the continuous variables created from the summed survey responses. Additionally, histograms and descriptive statistics were also used to identify outliers for each subscale. Table 8 provides characteristic items for each of the Genos EI subscale items. Table 10 provides subscale descriptions and characteristic items present in the Personal Resources Questionnaire.
3. Correlation analysis. To test the relationship between predictor variables and to check for excessive multicolinearity, the subscales of emotional intelligence were analyzed through Pearson's correlation analysis.
4. Simple linear regression analysis. Predictor variables were individually screened in simple linear regressions to determine whether or not a relationship existed between the dimensions of emotional intelligence and coping resources that serve as the

dependent variables in the study. Effect size and associated p-values were reported along with correlation coefficients.

5. Multiple regression analysis. All eligible variables were evaluated in multiple regression analyses designed to explore the combined effects of the emotional intelligence scores on coping resource scores. One regression model was used for each of the eligible dependent variables in order to explore the combined effects of predictor variables on each of the coping resource scores. To ultimately be considered as a significant predictor, independent variables were found to be significant at an alpha of .05 or less.

Ethical Considerations

The following safeguards were utilized to ensure that appropriate ethical standards were maintained in this study effort:

1. The University's Institutional Review Board (IRB) procedures were followed. A copy of the IRB letter of approval can be found in Appendix I.
2. Participants were fully informed of the purpose and the voluntary nature of the study in the informed consent letter.
3. Participants were offered the opportunity to receive the study results.
4. Participants were assured that any survey responses would remain anonymous in the final presentation of the results, that no one other than the researcher will see the completed instruments, and that their responses cannot in any way affect their professional positions.

Assumptions and Limitations

The following are assumed to be true but are not addressed in this study:

1. Study participants responded truthfully when answering questions about emotional intelligence posed in the emotional intelligence instrument and occupational stress inventory.
2. Participants understood questions and concepts about emotional intelligence and occupational stress.

The following limitations of this study may raise doubts regarding accuracy and validity of findings:

1. The research population is restricted to North Carolina community college presidents. Therefore, the specific and narrow focus of the research may limit the external validity of research findings. As a result, this study may not be subject to generalization beyond the population of this study. However, it should be recognized that the North Carolina Community College System contains a variety of variables that are typical of community college systems across the nation. Therefore, data and conclusions obtained from this study may be useful for benchmarking and replication in research in other states that have characteristics similar to North Carolina.
2. Because the OSI-R measures the extent to which roles are experienced and not the source of the stress, no causal relationship may be inferred from the data.
3. There is a risk of social desirability bias because role stress can only be recorded by self report and the experience of role stress is perceptual and may be interpreted by the respondent as positive or negative.
4. This research relies on self-report measures. Self-report inventories, as opposed to observed, rely on the perception of participants and, because they are affected by the participants' biases, may not result in the most accurate assessment.

5. The email introduction of the study to the study participants, followed by a web-based survey, may have limited the number of respondents to those who were comfortable with electronic research methods.
6. All study participants are volunteers. This process of self-selection may have limited the extent to which results of this study may be generalized to a larger population. It could be inferred that individuals who choose to complete a study are, by their very natures, more emotionally self aware.

Chapter Summary

This chapter included an overview of the methodology and design of this quantitative, research study. Although the literature review indicated the existence of ample research on the impact of emotional intelligence, a gap in the literature regarding possible correlations between the emotional intelligence of higher education leaders and their stress management behaviors was discovered. This research study involved an attempt to bridge this gap and provide an opportunity for further research to discover new trends in workplace emotional intelligence and occupational stress, which could result in improved personal health and organizational effectiveness, innovative training programs, and new hiring strategies.

The Genos EI Inventory, the only validated and accepted instrument specifically designed to measure workplace emotional intelligence, was used to collect data regarding the workplace emotional intelligence of the study participants. The Occupational Stress Inventory-Revised, which is one of the oldest and most validated occupational stress instruments, was conducted to gather adaptive coping behavior of the study participants. Various statistical analyses were applied to the collected data to answer the research questions and to examine the research

hypotheses. Chapter 4 contains a detailed analysis of the data related to the research questions and the related research hypotheses.

CHAPTER 4: RESULTS

The present study contributes to the body of knowledge and understanding about the relationship between emotional intelligence and stress management of North Carolina community college presidents. It investigated whether seven emotional intelligence factors were related to the president's self perception of four occupational stress-coping resource factors. The study was conducted to answer the following research question: Among North Carolina community college presidents, is there a relationship between emotional intelligence and stress management? In order to examine this relationship, descriptive statistics and regression analysis were employed.

This chapter is divided into three sections: Data Collection Process and Mechanism, Data Analysis, and Chapter Summary. The Data Analysis section is further divided into four subsections: (1) Internal Reliability of Test Scores; (2) Exploratory Analysis and Descriptive Statistics; and (3) Regression Analysis. To provide an in-depth analysis of each dimension of emotional intelligence and adaptive coping, tables and figures are provided.

Data Collection Process and Mechanism

To answer the research question posed in this study and to examine the associated hypothesis, two self-report questionnaires were deployed on-line, using one nonprobability survey for the collection of data.

The first questionnaire was the 31-item Genos EI Inventory (Concise Version) which was used to gather workplace emotional intelligence data from study participants. According to the Genos EI Inventory Technical Manual 2nd ed. (Gignac, 2010), emotional intelligence scores from the questionnaire represent the frequency with which an individual engages in various behaviors that are "relevant to the identification of the self and others' emotions, the reasoning with

emotions, and the general management of emotions within one's self and others" (p. 13). The seven subscale factors employed by this instrument include: Emotional Self-Awareness, Emotional Expression, Emotional Awareness of Others, Emotional Reasoning, Emotional Self-Management, Emotional Management, and Emotional Self-Control.

The second instrument used in this study was the 40-item Occupational Stress Inventory-Revised (OSI-R) Coping Resources Dimension, which is a measure of adaptive coping to occupational stress. The instrument measures coping resources though the employment of the Personal Resources Questionnaire (PRQ) which contains four subscales: Recreation, Self-Care, Social Support, and Rational/Cognitive Coping.

Study Population

With regard to the study population, all 58 North Carolina community college presidents were invited to participate in the study in March 2011. Of the 58 presidents surveyed, responses were received from 47, which yielded an 81% return rate. According to Babbie (1973), at least a 50% response rate is needed to reduce the chance of response bias. Babbie opines that a 50% response rate is 'adequate' for analysis while 60% is 'good' and 70% is 'very good'. Therefore, this study's response rate exceeds the 'very good' standard.

Mechanism

The collected data were entered into SPSS Version 17 for quality control and statistical analysis. Data quality control included verification of data validity, and identification of errors and missing data values, for each element. Following the initial quality assurance of the data, an analysis of the test scores was conducted to ensure the internal reliability of the test scores, within each subscale. Once sufficient reliability was confirmed, frequency distributions were calculated in order to establish a profile for each subscale. Descriptive statistics, such as mean,

standard deviation, and skewness were determined in order to describe, organize, and present the data.

Following descriptive statistics of the variable data, correlation analysis was conducted on the independent variables to check for excessive multicolinearity. Finally, regression analysis was performed to examine the relationship between variables and to test the study hypothesis.

Data Analysis

Internal Reliability of Test Scores

As previously noted, in order to justify aggregating subscale information for further analysis, it was important to verify the internal reliability of the test scores. Cronbach's alpha (α) is the statistic that was used to assess the reliability of survey answers. An alpha score was computed from each test item.

Dependent Variables

Table 12 presents the results of the reliability analyses conducted on the measures of occupational stress-coping resource subscales. It can be observed that the subscales of Self Care (SC), Social Support (SS), and Rational/Cognitive Coping (RC) are reliable in measuring their respective constructs as the Cronbach's alpha (α) for each subscale exceeds the established threshold value of 0.70. For the subscale RE, the observed alpha is 0.69. Therefore, the items in this subscale do not meet the targeted threshold score. However, since the Cronbach's alpha (α) value is very near the threshold score, this measure is considered to be sufficiently reliable for this exploratory study. According to authors such as Bartee, Grandjean, and Bieber, (2004) and Dawson & Trapp, 2001, this inclusion is permissible as an alpha greater than .60 is considered to be sufficient to justify using a scale in an academic setting.

Table 12

Reliability Analysis on Occupational Stress-Coping Resource Subscale Test Scores (N = 47)

Occupational Stress-Coping Resource	Cronbach's Alpha	N of Items
Recreation (RE)	.696	10
Self-Care (SC)	.785	10
Social Support (SS)	.823	10
Rational/Cognitive Coping (RC)	.753	10

Independent Variables

For the subscales of emotional intelligence, the owner of the Genos EI Inventory, that was used in this study, does not identify the sub-items within each subscale. Therefore, calculating the reliability and the validity of the items in the questionnaire was not possible. However, it was determined through various studies which have been conducted using the Genos Emotional Intelligence Questionnaire that the survey instrument is reliable and valid in measuring the constructs of emotional intelligence. Therefore, it was concluded that the seven emotional intelligence subscales are consistent with one another in that they represent one, and only one, area of interest.

Exploratory Analysis and Descriptive Statistics

This study used regression analysis to test relationships between the independent and the dependent variables. Regression analysis is a statistical method which can be used to examine the degree of a relationship between an independent variable and a dependent variable. Whereas for correlation both the independent variable and the dependent variable must possess a normal distribution, in regression analysis only the dependent variable needs have a normal distribution (Donnelly, 2004; Jaeger, 1993). Therefore, in order to verify the normality of the dependent variables used in this study, descriptive statistics were used to explore the data. Measures of central tendency and dispersion were generated for each subscale in order to understand how the responses were distributed. For variables with questionable normality, a Shapiro-Wilks normality test was conducted.

Dependent Variables

In order to validate the normality of subscale distributions, histograms were created to provide a visual representation of the aggregated variables created from the survey responses.

The histograms and a boxplot of the dependent variables were also used to identify outliers which might need to be removed from the data set, for each of the four subscales. Figure 5 provides the histograms for each of the occupational stress-coping resource subscale dependent variables.

From the histograms it can be observed that none of the distributions exhibit perfect normality. However, only the Social Support (SS) subscale appears to be particularly non-normal, and hence potentially the most problematic.

The Shapiro-Wilks test is a statistical test designed to detect departures from normality. Failing the normality test permits a researcher to state with 95% confidence that the data does not fit a normal distribution. On the other hand, passing the normality test permits a researcher to state that no significant departure from normality was found (Leech, Barrett, & Morgan, 2008). In order verify the normality of the four subscale distributions; this test was conducted on each of the variables. The null hypothesis for this test is that the distribution is normal. The test rejects the hypothesis of normality when the p-value is less than or equal to 0.05. The results of the Shapiro-Wilks test are presented in Table 13.

The results of the Shapiro-Wilks test indicate that only the Social Support (SS) subscale has a p-value so low that the null hypothesis of normality must be rejected. Each of the other subscales is sufficiently normal to make linear regression a reliable technique. This finding supports the observations noted in the histograms. As a result, the Social Support (SS) subscale was excluded from regression analysis.

A boxplot is a graphical display of selected summary measures for numerical variables. It is often used in exploratory data analysis to indicate whether a distribution is skewed and whether there are any unusual observations (outliers) in the data set (Leech et al., 2008). The

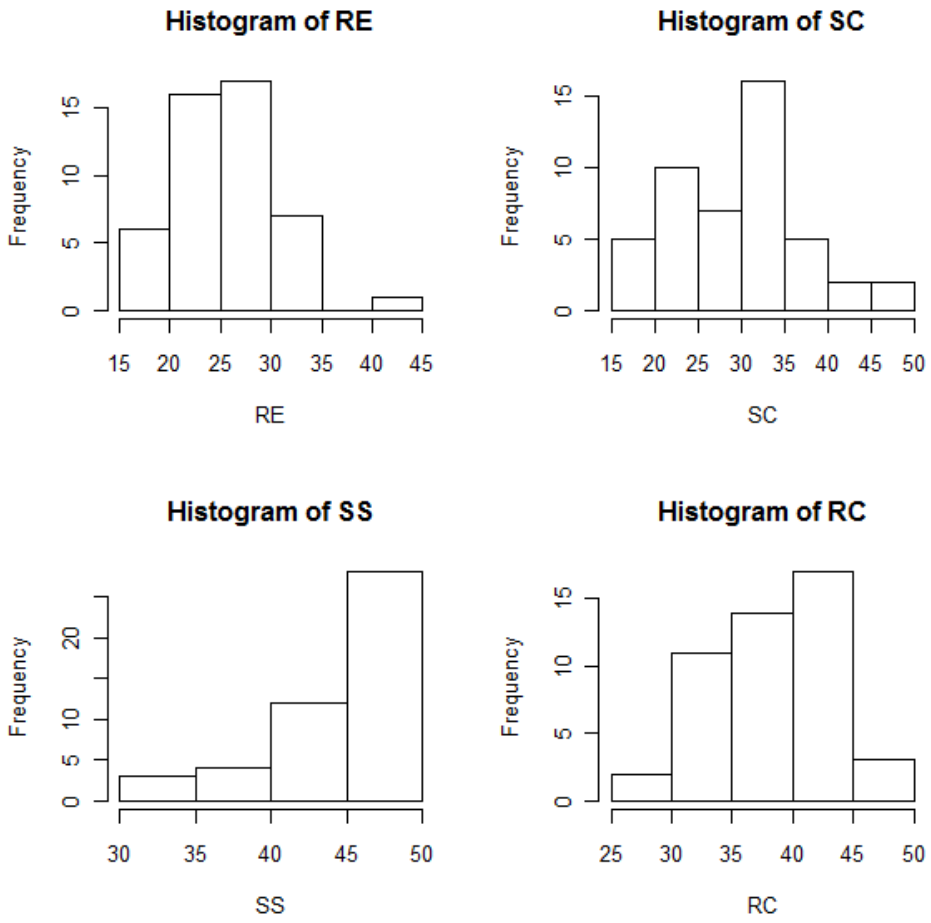

Figure 5. Histograms of the subscales of occupation stress-coping resource.

Table 13

Shapiro-Wilks Normality Test of Dependent Variables (N = 47)

Subscale	w	p-value
Recreation (RE)	0.955	0.070
Self-Care (SC)	0.968	0.215
Social Support (SS)	0.833	9.75E-06
Rational/Cognitive Coping (RC)	0.962	0.129

boxplot for the four Occupational Stress-Coping Resources subscale categories is provided in Figure 6.

This boxplot confirms the existence of the outliers that were suggested in the associated histograms. The figure indicates one significant (high) outlier for the Recreation (RE) subscale and two significant (low) outliers for the Social Support (SS) subscale. It was decided to retain all of the data points in the dataset and not remove these outliers from further data analysis.

A confidence interval is an estimate of a population parameter, and it is used to indicate the reliability of an observed value (Leech et al., 2008). The confidence intervals, on the means of the subscales at a 95% confidence level, as well as descriptive statistics for the dependent variables, are provided in Table 14.

The descriptive statistics for the dependent variables indicate that the Social Support (SS) subscale has a large negative skew. This negative skew suggests that a large number of the respondents gave the highest ranking to all questions in this subscale category. Additionally, there is a large range of mean scores, from a low of 26.33 for the Recreation (RE) subscale, to a high of 45.38 for the Social Support subscale. Further, the standard deviation for Self-Care (SC) is large, suggesting great variation in how much the respondents engage in self-care behavior.

In this study the mean score of dependent variable subscale of Recreation (RE) was 26.23 which was associated with a standard deviation (SD) of 4.88. Therefore, the study participants' overall Recreation (RE) coefficient of variation (CV) was .19, which roughly corresponds with the coefficient of variation (CV) associated with the Occupational Stress Inventory-Revised Edition normative sample of .26 (Osipow, 1998). The coefficient of variation (CV) is defined as the ratio of the standard deviation to the mean. It aims to describe the dispersion of the variable. The higher the coefficient of variation (CV), the greater the dispersion in the variable.

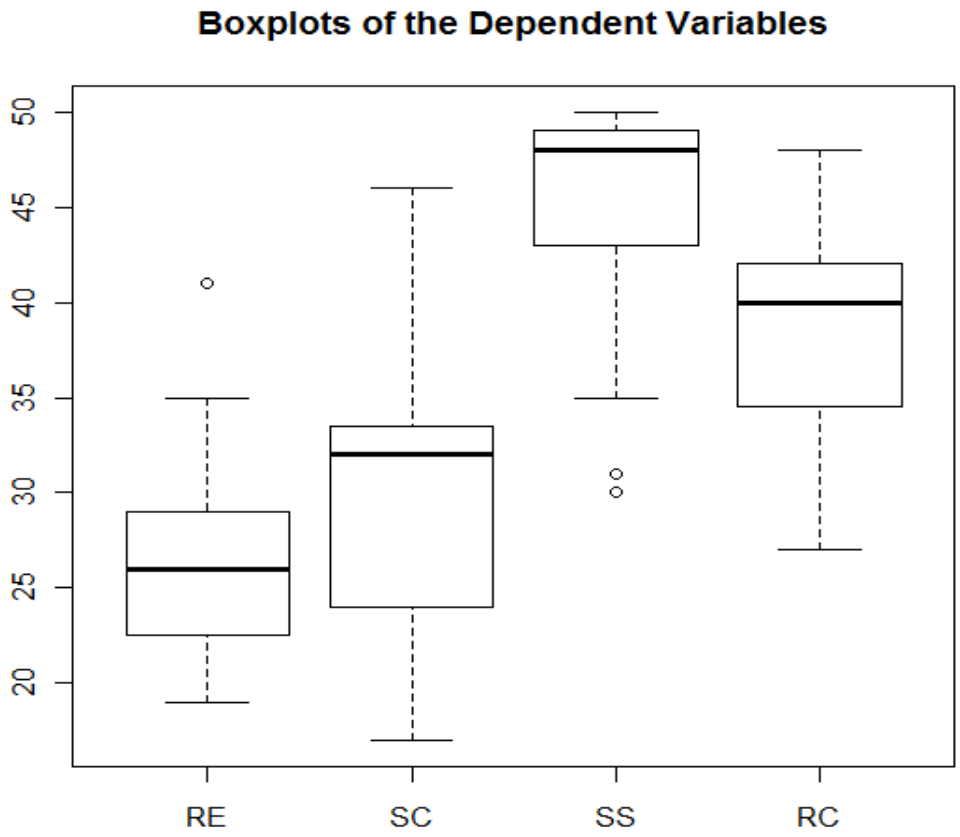

Figure 6. Boxplots of the dependent variables.

Table 14

Descriptive Statistics for Dependent Variables (N = 47)

Subscale	Min Statistic	Max Statistic	Mean Statistic	SD Statistic	Skew Statistic	Skew Std. Error	CI Min	CI Max
Recreation (RE)	19	41	26.23	4.882	0.69	0.347	24.801	27.667
Self-Care (SC)	17	46	30.04	7.316	0.265	0.347	27.895	32.191
Social Support (SS)	30	50	45.38	5.084	-1.394	0.347	43.890	46.876
Rational/Cognitive Coping (RC)	27	48	38.57	4.968	-0.287	0.347	37.116	40.033

The mean score of the dependent variable subscale of Self-Care (SC) was 30.04 which was associated with a standard deviation (SD) of 7.32. Therefore, the study participants' overall Recreation (RE) coefficient of variation (CV) was .24, which closely corresponds with the coefficient of variation (CV) associated with the Occupational Stress Inventory-Revised Edition normative sample of .27 (Osipow, 1998).

The mean score of the dependent variable subscale of Social Support (SS) was 45.38 which was associated with a standard deviation (SD) of 5.08. Therefore, the study participants' overall Recreation (RE) coefficient of variation (CV) was .11, which roughly corresponds with the coefficient of variation (CV) associated with the Occupational Stress Inventory-Revised Edition normative sample of .20 (Osipow, 1998).

The mean score of the dependent variable subscale of Rational/Cognitive Coping (RC) was 38.57 which was associated with a standard deviation (SD) of 4.97. Therefore, the study participants' overall Rational/Cognitive Coping (RC) coefficient of variation (CV) was .13, which roughly corresponds with the coefficient of variation (CV) associated with the Occupational Stress Inventory-Revised Edition normative sample of .19 (Osipow, 1998). Variation within the population of North Carolina Community college presidents is less in all cases than the variation seen in the normative sample.

OSI-R Normative Sample

Study participants attained a mean score on each of the subscales that exceeded the associated mean score of the OSI-R normative sample. The normative sample was drawn from 983 professionals from a wide variety of occupations, ranging from scientist/professional to laborer/maintenance worker. For comparison purposes, the normative sample descriptive statistics subscales include: (a) Recreation (M = 26.03, SD = 6.78), (b) Self-Care (M = 25.45,

SD 6.81), (c) Social Support (M = 40.53, SD = 8.11), and (d) Rational/Cognitive Coping (M = 35.48, SD = 6.57) (Osipow, 1998).

The OSI-R Professional Manual provides raw score to *T*-score conversions for each OSI-R dimension. This conversion enables researchers to compare respondents' scores to the scores of the normative sample. According to Osipow (1998), "*T* scores are linear transformations of raw scores, derived to have a mean of 50 and a standard deviation of 10" (p. 7).

The categorizations and interpretive guidelines provided by the Occupational Stress Inventory-Revised Edition Professional Manual (Osipow, 1998) were used to categorize the collected occupational stress-coping resources data that were collected by the Personal Resources Questionnaire (PRQ). For the PRQ scales, high scores suggest well developed coping resources. For these scales, (a) scores below 20*T* suggest significant lack of coping resources, (b) scores in the range of 30*T* to 39*T* suggest mild deficits in coping skills, (c) scores in the range of 40*T* to 59*T* suggest average coping resources, whereas (d) scores higher than, or equal to 60T suggest increasingly strong coping skills.

For purposes of this study, scores are grouped as Low = below 20*T*, Very Low = 30*T* to 39*T*, Average = 40*T* to 59*T*, and High = or above 60*T*. As presented in Table 15, there were respondents with "average" or "high" scores on all four subscales; none of the study participants were categorized as "very low" on any subscale.

It can be noted that a majority of study participants were categorized as either average or high in all subscales. There were more participants in the average category for all subscales except the Self-Care (SC) subcategory, which had a small majority. On the subscales of Social Support (SS) and Rational/Cognitive Coping (RC), there were only two participants in the low category. Finally, no participants scored as very low on any of the subscale categories.

Table 15

Personal Resources Questionnaire Interpretations (N = 47)

Subscale	Very Low n / %	Low n / %	Average n / %	High n / %
Recreation (RE)			38 / 80.9	9 / 19.1
Self-Care (SC)			23 / 48.9	24 / 51.1
Social Support (SS)		1 / 2.1	30 / 63.9	16 / 34
Rational/Cognitive Coping (RC)		1 / 2.1	32 / 68.2	14 / 29.7

Independent Variables

In order to evaluate the distributions of the independent variables, histograms were created to provide a visual representation of the aggregated variables created from the summed survey responses. The histograms and a boxplot of the independent variables were also used to identify outliers for each of the subscales. Figures 7 and 8 provide the histograms for each of the emotional intelligence subscale independent variables.

The histograms of the Emotional Self Assessment (ESA), Emotional Expression (EE), Emotional Awareness of Others (EAO), Emotional Reasoning (ER), Emotional Management of Others (EMO), and Emotional Self Control (ESC) emotional intelligence subscales do not suggest normality. However, as previously noted, regression analysis does not require independent variables to be normally distributed.

As with the dependent variables, a boxplot provides a method to compare central tendency of the independent variables and to more adequately identify outliers which may need to be removed from the dataset. The boxplot for the seven emotional intelligence subscale categories is provided in Figure 9.

Figure 9 indicates one significant outlier (low) for each of the Emotional Self Awareness (ESA), Emotional Awareness of Others (EAO), Emotional Reasoning (ER), Emotional Self Management (ESM), and Emotional Management of Others (EMO) subscales. Figure 10 provides the histogram for the Total Emotional Intelligence scores. It can be observed that the shape of the data is normal. The Shapiro-Wilks test confirms this statement with $W = 0.96$ and a p-value = 0.21. Table 16 provides the descriptive statistics for the independent variables.

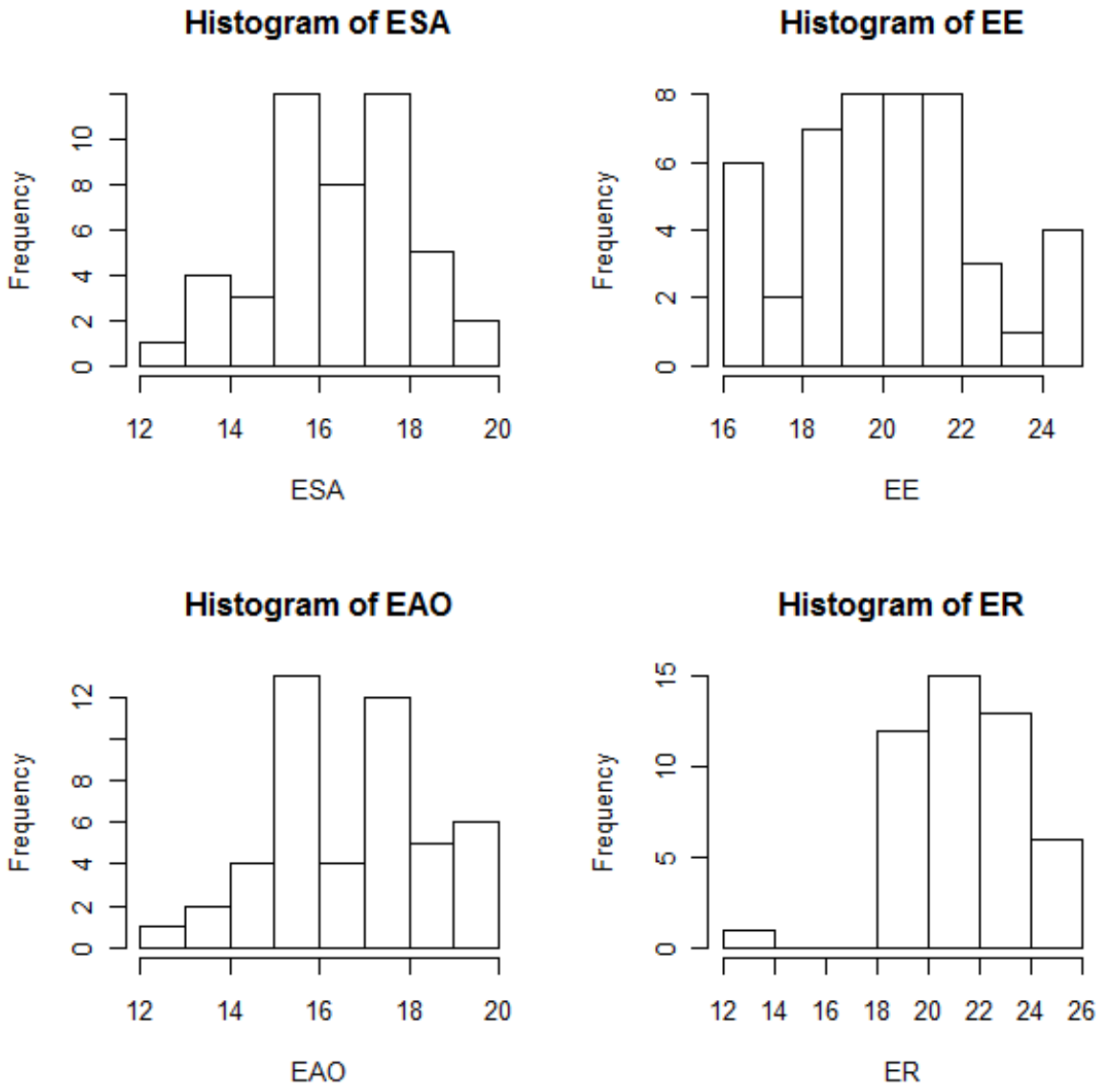

Figure 7. Histograms of the ESA, EE, EAO and ER subscales of emotional intelligence.

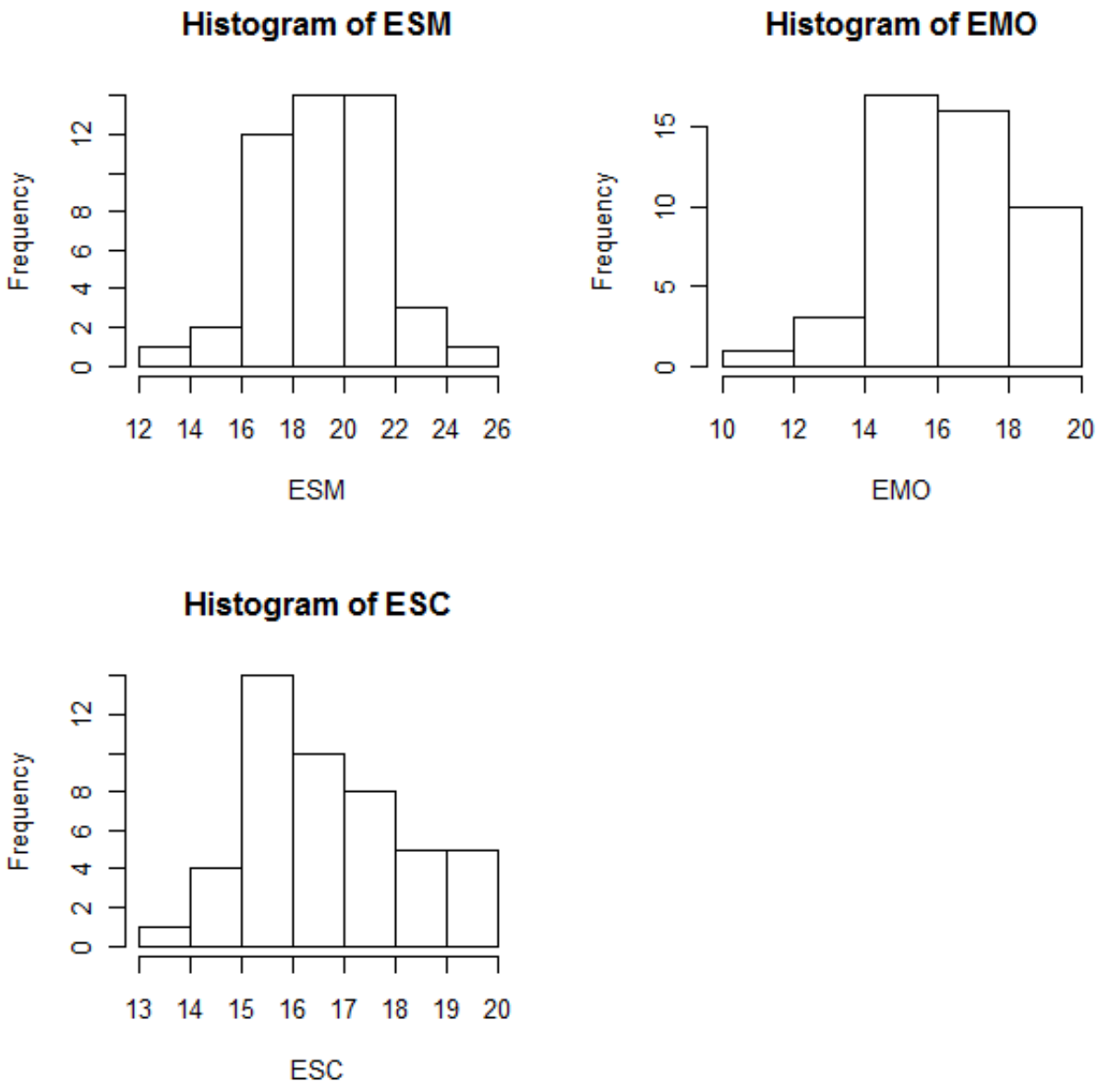

Figure 8. Histograms of the ESM, EMO, and ESC subscales of emotional intelligence.

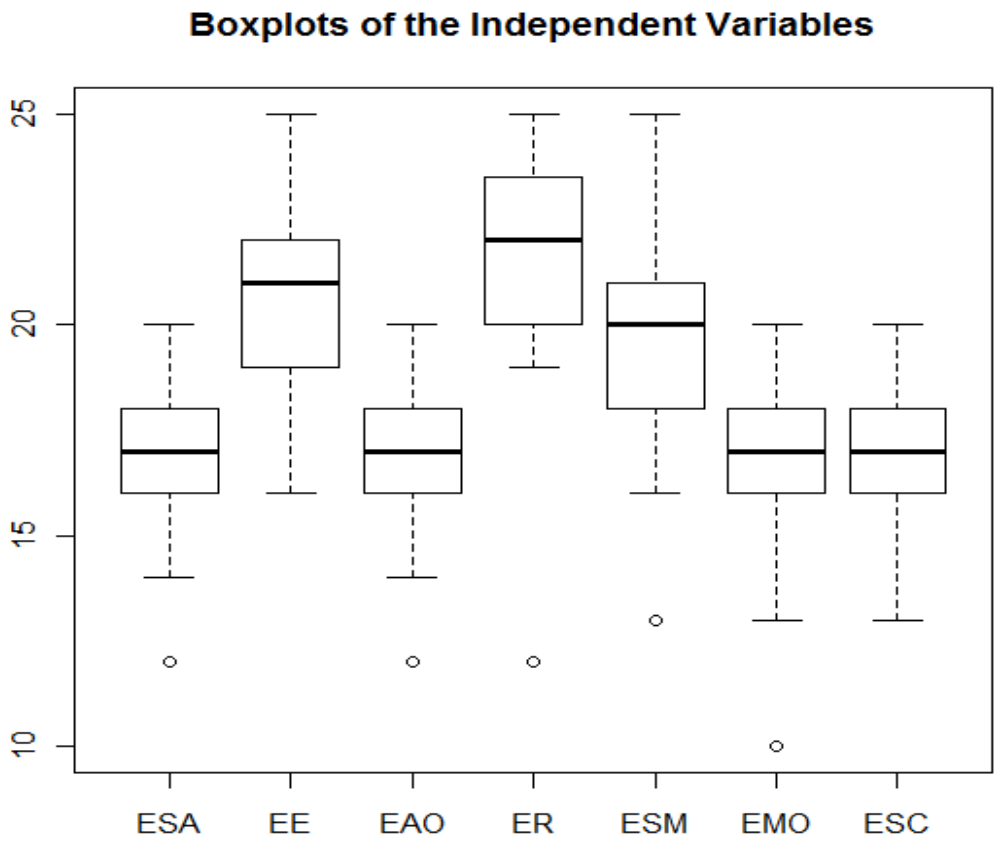

Figure 9. Boxplots of independent variables.

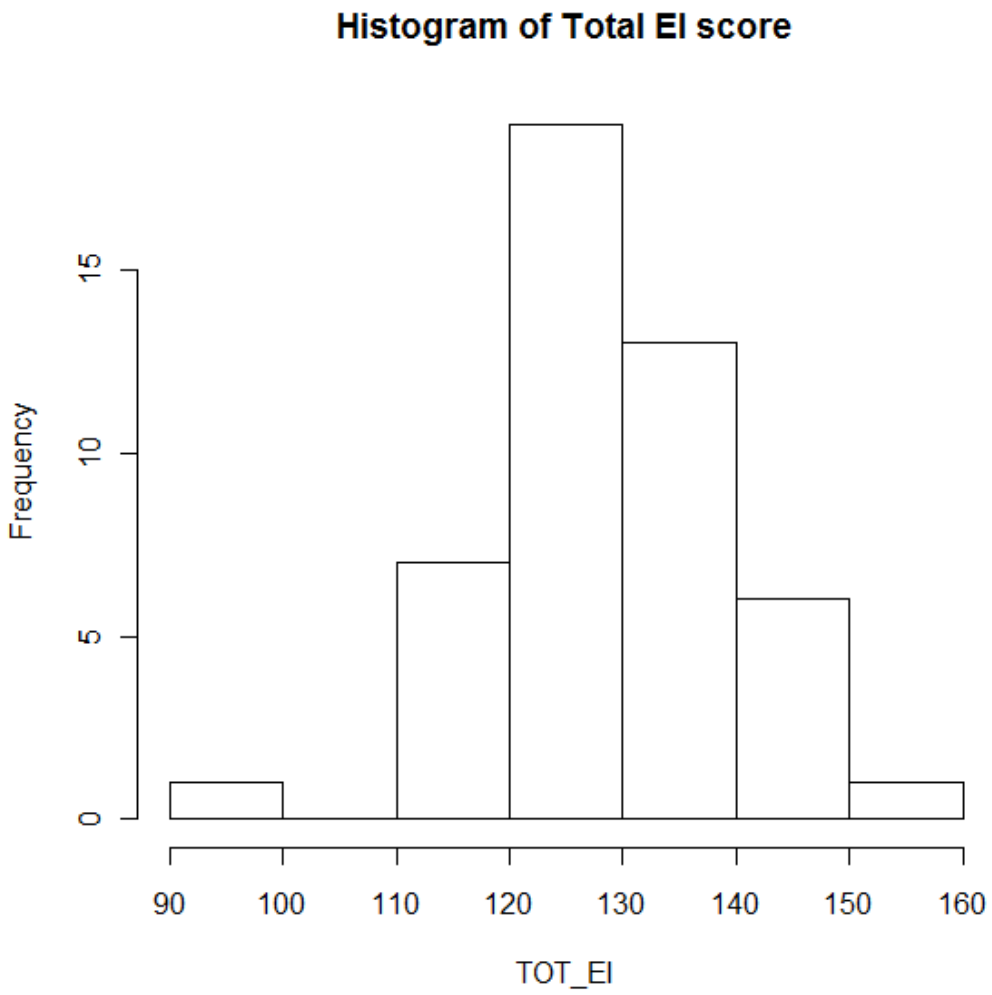

Figure 10. Histogram of total emotional intelligence scores.

Table 16

Descriptive Statistics for Independent Variables (N = 47)

Subscale	Min Statistic	Max Statistic	Mean Statistic	SD Statistic	Skew Statistic	Skew Std. Error
ESA	12	20	16.850	1.706	-0.471	0.347
EE	16	25	20.570	2.301	0.124	0.347
EAO	12	20	17.170	1.845	-0.326	0.347
ER	12	25	21.810	2.374	-1.381	0.347
ESM	13	25	19.850	2.274	-0.225	0.347
EMO	10	20	16.870	2.039	-0.704	0.347
ESC	13	20	17.150	1.601	0.111	0.347
Total EI	96	149	130.277	10.601	-0.259	0.347

According to Jaeger (1993), "The quartiles of a score distribution are the points on a score scale that divide the distribution into fourths." The first quartile, or 25th percentile (Q1), is the number for which 25% of values in the data set are smaller than Q1. The second quartile, or the 50^{th} percentile (Q2), also known as the median, is the number for which 50% of observations are lower and 50% are higher. The third quartile, or 75th percentile (Q3) is the value such that 75% of the observations are less than Q3.

From Table 17 and Figure 11, it can be observed that the total emotional intelligence scores of the study respondents tend to be grouped in the upper end of the test score range. Also, it can be observed that the mean total emotional intelligence score of the study respondents exceeded the Genos EI normative sample mean of 121.86 by 8.37, or 6.9% (Palmer, Stough, Hamer, & Gignac, in press, p. 20).

Regression Analysis

Regression analysis allows researchers to examine the nature and strength of the relations between variables and the contribution of one or more independent variables (Urban, 2005). In order to test the relationships between the emotional intelligence variables and the coping resources variables, simple linear regression analysis and multiple regression analysis was employed.

Simple Linear Regression

Simple linear regression can be used to examine the degree of relationship between a single dependent variable and a single independent variable (Donnelly, 2004). Accordingly, a series of simple linear regressions was performed to assess the relationship between the independent variable subscales of emotional intelligence and the dependent variable subscales of occupational stress-coping resources.

Table 17

Quartiles for Total Emotional Intelligence (N = 47)

Quartile	Percentile	Score Value	Respondent #
Q1	25	125	15
Q2	50	129	24
Q3	75	137	36
Q3	100	154	47

Note. Mean: 130.23; Median: 129; Lowest value: 96; Highest value: 154.

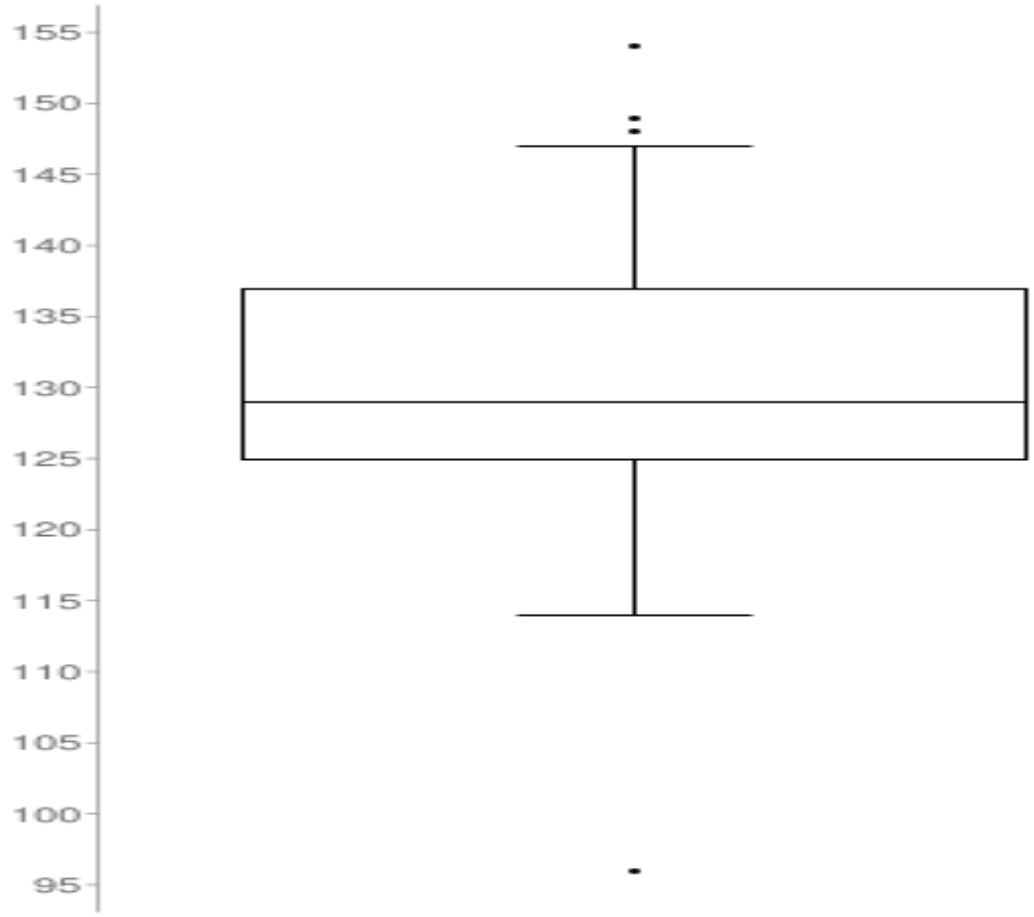

Figure 11. Boxplot of total emotional intelligence scores.

The relationship of the dependent variable Recreation (RE) to each of the seven individual independent variables as shown in Table 18. This table includes the coefficient, which tells the direction and size of the effect, the t-statistic and associated p-value, which indicates whether or not the dependent variable can be considered to be significantly related to the independent variable, and the Coefficient of Determination of the regression (R2), which tells how much of the variation observed in the dependent variable is explained by the model.

At an alpha of 0.05, the only two independent variables that can be determined with 95% confidence to be significantly related to the Recreation (RE) subscale are Emotional Self-Awareness (ESA) and Emotional Awareness of Others (EAO). Considering the relationship of the dependent variable Self-Care (SC) to each of the independent variables individually, Table 19 summarizes the results for each of the regressions.

At an alpha of 0.05, the only two variables that are significantly related to Self-Care (SC) are Emotional Reasoning (ER) and Emotional Self Control. They individually explain 10% and 11% of the variation observed in this dependent variable.

Considering the relationship of the dependent variable Recreation (RC) to each of the independent variables individually, Table 20 summarizes the results for each of the regressions.

From Table 20, it can be observed that all of the independent variables, when considered individually, are significantly related to the Rational/Cognitive Coping (RC) variable. Table 21 provides a summary of the significant relationships between the variables, as determined by the simple regression analysis.

Table 18

Regression Analysis for Recreation (RE) Subscale (N = 47)

Subscale	Coefficient	t-statistic	p-value	R2
Emotional Self Awareness (ESA)	1.095	2.778	0.008	0.146
Emotional Expression (EE)	0.229	0.727	0.471	0.012
Emotional Awareness of Others (EAO)	1.003	2.749	0.009	0.144
Emotional Reasoning (ER)	0.540	1.827	0.074	0.069
Emotional Self-Management (ESM)	0.410	1.306	0.198	0.037
Emotional Management of Others (EMO)	-0.071	-0.199	0.843	0.001
Emotional Self Control (ESC)	0.537	1.201	0.236	0.031

Table 19

Regression Analysis for Self-Care (SC) Subscale (N = 47)

Subscale	Coefficient	t-statistic	p-value	R2
Emotional Self Awareness (ESA)	1.107	1.793	0.080	0.067
Emotional Expression (EE)	0.357	0.757	0.453	0.013
Emotional Awareness of Others (EAO)	0.387	0.658	0.514	0.010
Emotional Reasoning (ER)	0.977	1.143	0.030	0.101
Emotional Self-Management (ESM)	0.304	0.636	0.528	0.009
Emotional Management of Others (EMO)	0.550	1.041	0.303	0.024
Emotional Self Control (ESC)	1.515	2.358	0.023	0.110

Table 20

Regression Analysis for Rational/Cognitive Coping (RC) Subscale (N = 47)

Subscale	Coefficient	t-statistic	p-value	R2
Emotional Self Awareness (ESA)	1.635	4.553	0.000	0.315
Emotional Expression (EE)	0.626	2.033	0.048	0.084
Emotional Awareness of Others (EAO)	1.037	2.799	0.008	0.148
Emotional Reasoning (ER)	0.896	3.176	0.003	0.183
Emotional Self-Management (ESM)	0.681	2.201	0.033	0.097
Emotional Management of Others (EMO)	0.980	2.947	0.005	0.162
Emotional Self Control (ESC)	1.526	3.789	0.000	0.242

Table 21

Significant Simple Linear Regression Relationships Between Variables (N = 47)

Subscale	RC	RE	SC
Emotional Self-Awareness (ESA)	X **	X *	
Emotional Expression (EE)	X **		
Emotional Awareness of Others (EAO)	X **	X *	
Emotional Reasoning (ER)	X **		X **
Emotional Self-Management (ESM)	X **		
Emotional Management of Others (EMO)	X **		
Emotional Self Control (ESC)	X **		X **

Note. * Correlation is significant at the 0.05 level; ** Correlation is significant at the 0.01 level.

Multiple Regression Analysis

As previously stated, simple regression is limited to examining the relationship between a single dependent variable and a single independent variable. If more than one independent variable is involved in the relationship, then it is necessary to graduate to multiple regression analysis (Donnelly, 2004). In multiple regression analysis, the relationship between a single dependent variable and more than one independent variable is determined (Jaeger, 1993). Multiple regression analysis allows the researcher to see, among other things, (a) how the independent variables are related to a dependent variable, (b) the relative strength of each independent variable, and (c) whether there are interaction effects between the independent variables the strength of the relationship between the independent variables (Urdan, 2005).

In order to justify adding additional independent variables, it is necessary to ensure that the contribution of each independent variable is unique (Donnelly, 2004). According to Salkind (2005), when selecting more that one independent variable for relationship testing, it is important to ensure that the independent variables are independent or unrelated to each other. The absence of independence between independent variables is called multicollinearity. In this study, correlation analysis was used to determine the presence of multicollinearity.

Correlation Analysis

According to Leech et al (2008) "multicollinearity is a statistical phenomenon in which two or more predictor variables to be used in a multiple regression model are highly correlated" (p. 78). This condition can be problematic as it can lead to misleading or inaccurate results. It occurs when there are high inter-correlations among independent variables. In other words, it happens when two or more independent variables contain much of the same information. If this situation occurs, "the coefficient estimates may change erratically in response to small changes

in the model or the data" (Leech et al., 2008, p. 49). In order to ascertain whether or not multicolinearity exists between the study independent variables, a Pearson's correlation coefficient was conducted. Table 22 provides the results of the analysis.

According to Leech et al. (2008), multicollinearity does not begin to affect a model until the correlation coefficient is significantly above 0.80. Therefore, since the highest correlation observed is 0.721, all seven variables may be included in a multiple linear regression analysis.

The simple linear regressions were followed up with multiple linear regression analysis in which the independent variables were considered simultaneously. For the dependent variable Recreation (RE), the results of the multivariate analysis are shown in Table 23.

When all the independent variables are considered simultaneously, the relationship to Recreation (RE) is most significant to the independent variable Emotional Management of Others (EMO) with a p-value = 0.002. The dependent variables of Emotional Awareness of Others (EAO) and Emotional Management of Others (EMO) are also significantly related to the Recreation (RE) variable.

For the dependent variable Self Care (SC), the results of the multivariate analysis are shown in Table 24. When all the independent variables are considered simultaneously, the relationship to Self Care (SC) indicates that there is no significant independent variable.

For the dependent variable Rational/Cognitive Coping (RC) the results of the multivariate analysis is shown in Table 25. When all the independent variables are considered simultaneously, the relationship to Emotional Self Awareness (ESA) and Emotional Self Control (ESC) emerge as significant. Table 26 provides a summary of the significant relationships between the variables, as determined by the multiple regression analysis.

Table 22

Pearson's Correlation Coefficients on Independent Variables (N = 47)

Subscale	ESA	EE	EAO	ER	ESM	EMO	ESC
Emotional Self-Awareness (ESA)	1.000	0.382	0.429	0.556	0.263	0.376	0.414
Emotional Expression (EE)	0.382	1.000	0.606	0.574	0.428	0.507	0.336
Emotional Awareness of Others (EAO)	0.429	0.606	1.000	0.721	0.462	0.665	0.381
Emotional Reasoning (ER)	0.556	0.574	0.721	1.000	0.433	0.695	0.454
Emotional Self-Management (ESM)	0.263	0.433	0.462	0.433	1.000	0.454	0.537
Emotional Management of Others (EMO)	0.376	0.507	0.665	0.695	0.451	1.000	0.385
Emotional Self Control (ESC)	0.414	0.336	0.381	0.454	0.537	0.385	1.000

Table 23

Multiple Regression Analysis for RE Subscale (N = 47)

Subscale	Estimate	Std. Error	t-value	p-value
Emotional Self Awareness (ESA)	0.945	0.438	2.158	0.037*
Emotional Expression (EE)	-0.446	0.346	-1.289	0.205
Emotional Awareness of Others (EAO)	1.651	0.530	3.117	0.003**
Emotional Reasoning (ER)	0.218	0.445	0.490	0.627
Emotional Self-Management (ESM)	0.295	0.341	0.865	0.392
Emotional Management of Others (EMO)	-1.410	0.441	-3.196	0.002**
Emotional Self Control (ESC)	-0.070	0.478	-0.146	0.885

Note. * Correlation is significant at the 0.05 level. ** Correlation is significant at the 0.01 level.

Table 24

Multiple Regression Analysis for SC Subscale (N = 47)

Subscale	Estimate	Std. Error	t-value	p-value
Emotional Self Awareness (ESA)	0.274	0.760	0.360	0.721
Emotional Expression (EE)	-0.106	0.601	-0.177	0.860
Emotional Awareness of Others (EAO)	-0.993	0.920	-1.080	0.287
Emotional Reasoning (ER)	1.338	0.773	1.731	0.091
Emotional Self-Management (ESM)	-0.378	0.592	-0.639	0.527
Emotional Management of Others (EMO)	-0.183	0.766	-0.239	0.813
Emotional Self Control (ESC)	1.360	0.830	1.638	0.110

Table 25

Multiple Regression Analysis for RC Subscale (N = 47)

Subscale	Estimate	Std Error	t-value	p-value
Emotional Self Awareness (ESA)	1.2518	0.3746	3.358	0.002**
Emotional Expression (EE)	-0.105	0.349	-0.301	0.765
Emotional Awareness of Others (EAO)	0.191	0.535	0.357	0.723
Emotional Reasoning (ER)	-0.128	0.450	-0.284	0.778
Emotional Self-Management (ESM)	-0.011	0.344	-0.032	0.975
Emotional Management of Others (EMO)	0.399	0.445	0.895	0.376
Emotional Self Control (ESC)	0.971	0.399	2.432	0.019*

Note. * Correlation is significant at the 0.05 level; ** Correlation is significant at the 0.01 level.

Table 26

Significant Multiple Linear Regression Relationships Between Variables (N = 47)

Subscale	RE	RC	SC
Emotional Self Awareness (ESA)	X*	X**	
Emotional Expression (EE)			
Emotional Awareness of Others (EAO)	X**		
Emotional Reasoning (ER)			
Emotional Self-Management (ESM)			
Emotional Management of Others (EMO)	X**		
Emotional Self Control (ESC)		X*	

Note. * Correlation is significant at the 0.05 level. ** Correlation is significant at the 0.01 level.

Chapter Summary

The objective of this study was to examine the possible relationship between occupational stress management and workplace emotional intelligence among North Carolina community college presidents. Two on-line data collection instruments were combined into one survey instrument which were used to collect data regarding workplace emotional intelligence and stress management behavior from 47 study participants. Workplace emotional intelligence data were measured by the Genos EI Inventory, and the Occupational Stress Inventory-Revised (Personal Resources dimension) was used to measure the personality behavior data.

Descriptive statistics for the dependent variables are shown in Table 14. Descriptive statistics for the independent variables are shown in Table 16. All reliability estimates for the Occupational Stress-Coping Resource Subscale were above .60, which many researchers regard as sufficient to justify using a scale (Bartee et al., 2004).

The relationship between participants' workplace emotional intelligence factors and their adaptive coping dimensions was examined by performing a series of simple linear regressions. In these regressions, it was determined that out of the seven subscales of emotional intelligence the dependent variable of Rational/Cognitive Coping (RC) was related to all seven independent variables. Out of the seven subscales of emotional intelligence, only Emotional Self- Awareness (ESA) and Emotional Awareness of Others (EAO) were related to the dependent variable of Recreation. Out of the seven subscales of emotional intelligence, only Emotional Reasoning (ER) and Emotional Self-Control (ESC) were related to the Self-Care (SC) dependent variable.

To test the inter-relationships between the independent variables, multiple linear regression analysis was conducted. This analysis suggested two significant relationships. The first is the dependent variable of Recreation (RE) as a function of the Emotional Self-Awareness

(ESA), Emotional Awareness of Others (EAO), and Emotional Management of Others (EMO). The second identifies Rational/Cognitive Coping (RC) to be a function of Emotional Self-Awareness (ESA) and Emotional Self-Control (ESC).

Chapter 5 presents an interpretation of the research findings. It also highlights the study limitations and recommendations for future research.

CHAPTER 5: SUMMARY, DISCUSSION, AND IMPLICATIONS FOR FUTURE RESEARCH

Background

In the current environment, community colleges face a myriad of challenges including: enrollment surge, fiscal retrenchment, intense scrutiny, and rigid accountability. These challenges induce stress on all college personnel, including college presidents. This stress can negatively affect both the president's personal health and the organization's health. The literature suggests that emotional intelligence may be key to stress management (Austin et al., 2005; Gardner, 2005; Sahar-Khiz, 2010). It was therefore fitting to study these variables in order to discern potential relationships between the two. If linkages between emotional intelligence and stress management of North Carolina community college presidents could be confirmed then it would be advantageous for institutions to pursue actions which maximize emotional intelligence in the selection of new presidents and in standing presidents.

The purpose of this study was to address the research question: Among North Carolina community college presidents, is there a relationship between emotional intelligence and stress management? This research investigated the emotional intelligence and the stress-management of the presidents in the North Carolina community college system in order to determine if there is a relationship between these two constructs. The study participants consisted of presidents employed in the 58 community colleges in the North Carolina, as of March 9, 2011. Of the 58 possible participants, 47 individuals or 81% responded to the study request.

The remainder of this chapter includes a summary of the findings based on the research question and hypothesis introduced in Chapter 1, the review of relevant literature in Chapter 2, the research design described in Chapter 3, and the analysis of collected data in Chapter 4.

Additionally, this chapter includes study limitations, and recommendations, for future research that may provide additional understanding about the use of emotional intelligence and stress management within higher education settings.

Findings and Interpretations

Survey data was used to address the research question and examine the hypothesis. A p-value of .05 was established for supporting the rejection of the null hypothesis at a 95% confidence level. Based on the statistical analyses of the collected data as presented in Chapter 4, this section provides an interpretation of the findings for the research question. Additionally, other findings and interpretations not directly associated with the research question were gathered from the descriptive statistics and the regression models. These findings provide insight into the emotional intelligence and stress management of the study population.

Research Question

The research question posed by this study inquired whether a relationship exists with the study participants between workplace emotional intelligence and stress management. Regression modeling was conducted to test potential relationships. Multiple regression analysis indicated significant positive relationships, at a p-value of 0.05 and 95% confidence, between three independent variable subscales and two dependent variable subscales (see Table 26). These relationships are described in the following paragraphs.

Relationship Testing

Emotional Self-Awareness and Recreation

The first significant positive relationship was between Emotional Self-Awareness and Recreation. Emotional Self-Awareness indicates "the relative frequency with which an individual consciously identifies their emotions at work. It also represents the frequency with

which an individual is aware that their emotions may motivate or affect their thoughts and behaviours at work" (Gignac, 2010, p. 11). Recreation indicates "the extent to which the individual makes use of and derives pleasure and relaxation from regular recreational activities" (Osipow, 1998, p. 2). Research by authors such as Ebbesen, Prkachin, Mills, and Green (1992) and Long (1984) opine that recreation is an antidote for stress.

This relationship may suggest that study participants who are emotionally self-aware understand the value of recreation as a stress reducer and they avail themselves of recreational opportunities, thus better managing their stress. It can be presumed that if a person is "in-tune" with his/her self emotions at work it is likely that such a person would be aware of how stress and stressors are affecting those emotions and recognize the need for adaptive coping in order to obtain stress relief. This self regulation might result in awareness of the need for recreation to mitigate the stress experience.

Emotional Self-Awareness and Rational/Cognitive Coping

The second significant positive relationship was between Emotional Self-Awareness and Rational/Cognitive Coping. Rational/Cognitive Coping indicates "the extent to which the individual possesses and uses cognitive skills in the face of work-related stress" (Osipow, 1998, p. 2). It can be presumed that if a person is aware of his/her emotions it is likely that such a person will also be aware of how stress and stressors are affecting those emotions and recognize the need for adaptive coping. In this situation an individual with high scores will likely "take a systematic approach to solving problems, think through the consequences of their choices, and thereby be better able to identify important elements of problems encountered" (Osipow, 1998, p. 13). They may also be better able to avoid ruminating about job related stressors when they are away from work, thereby minimizing stress.

Emotional Awareness of Others and Recreation

The third positive significant relationship was between Emotional Awareness of Others and Recreation. Emotional Awareness of Others "measures the relative frequency with which an individual identifies the emotions expressed by others in the workplace. The emphasis is on the awareness of both verbal and non-verbal expressions of emotions by others. Further, there is also an emphasis on understanding the nature of the emotions that may motivate or affect the behaviours of others at work" (Gignac, 2010, p. 12). This relationship may suggest that a president who is "in-tune" with the emotions of others will know when work stressors are impacting subordinations and potentially affecting organizational effectiveness and job satisfaction. A president who also understands and utilizes recreation for personal stress relief will likely also understand the value of recreation for his or her subordinates. Therefore, a leader who is aware of the emotions of others will know when stressors are impacting individual performance and job satisfaction. It is likely that such a leader would initiate and sponsor recreational activities on behalf of employees. Practical examples of such recreational activities might include; cook outs/picnics, time off, sabbaticals, paid vacation travel, group attendance of sports events, and paid faculty and staff development.

Emotional Management of Others and Recreation

The fourth positive relationship was between Emotional Management of Others and Recreation. Emotional Management of Others "measures the relative frequency with which an individual manages the emotions of others successfully. Actions taken to motivate colleagues or subordinates are included within this subscale, as are demonstrations of modifying the emotions of others for their own personal betterment at work. Emotional Management of Others involves creating a positive working environment for others, or specifically helping an individual resolve

an issue that is causing them distress" (Gignac, 2010, p. 13). A leader who is adept in managing the emotions of others will likely understand and embrace previously discussed stress theories such as, the Siegrist's (1996) Effort Rewards Imbalance Theory, the Ursin and Eriksen's (2004) Cognitive Arousal Theory, and Bandura's (1977) Efficacy Theory of Emotions and Stress. This relationship, much like the emotional awareness of others and recreation relationship, may suggest that a president who effectively makes use of regular recreational activities to reduce stress and relax will likewise view recreation as a means to help manage emotions (and thereby stress) of subordinates. Such a leader may use various activities, such as relaxation techniques, exercise, and wellness programs, to engage others in what amounts to therapeutic recreational activities in order to help subordinates to improve their quality of life and to improve organizational effectiveness. This approach is inline with the use of recreation as a stress management technique suggested by researchers such as Obiyemi and Ibraheem (2007).

Emotional Self Control and Rational/Cognitive Coping

The fifth positive relationship was between Emotional Self Control and Rational/Cognitive Coping. Emotional Self Control indicates "the relative frequency with which an individual controls their strong emotions appropriately in the workplace. A substantial focus is placed on the demonstrable maintenance of focus or concentration on the task at hand in the face of emotional adversity. Although similar to Emotional Self-Management, Emotional Self-Control incorporates an additional focus on the behavioural demonstration of controlling intense reactive emotions at work, such as anger or jubilation. In this sense, Emotional Self-Control is more reactive, while Emotional Self-Management is more proactive" (Gignac, 2010, p. 13). This positive relationship indicates that presidents with high emotional self control are more able to use their cognitive skills to facilitate thought before reaction. In doing so, an emotionally

intelligent president will minimize damage to relationships caused by rash actions. Concurrently it is likely that these presidents will also moderate their own stress levels.

Additional Findings

Mean Emotional Intelligence Scores

The study methodology called for the measurement of the study participants' workplace emotional intelligence. The results of this measurement indicate that the study population's mean total emotional intelligence score exceeds the mean score of the normative sample. Additionally, the same result was found for all seven of the workplace emotional intelligence subscales. This result suggest that as a group, the study participants possess an above average level of emotional intelligence compared to the instruments' normative sample. According to the Genos Emotional Intelligence Inventory Technical Manual (Gignac, 2010), "the normative sample population consists of adult individuals across the adult age spectrum of individuals likely to be found in the workplace" (p. 33). The gender breakdown of the normal sample "is close to 50/50 with slightly more females (52.9%) than males (47.1%)" (Gignac, 2010, p. 35). The normative sample participants were also relatively well educated, although only 2.5% of the participants held a doctoral degree. The distribution of the normative sample participants based on occupation was "relatively heterogeneous amongst a number of educated occupational groups" (Gignac, 2010, p. 35). The professions of the normative sample participants included; Administration, Development, Financial Management, Operations Sales/Marketing, Support Services, and Technical. The role-levels of the normative sample was relatively diversified, that is from "employee with no direct reports" to "CEO", with some concentration at the mid-level management role. The normative sample also consisted of "individuals across a range of industries" (Gignac, 2010, p. 36).

The finding that the emotional intelligence of the college presidents that participated in this study exceeds the normative sample emotional intelligence is consistent with the research of Mayer and Salovey (1997); Petrides, Frederickson, and Furnham (2004); and Rozell, Pettijohn, and Parker (2002) which indicates that that high emotional intelligence is correlated with high academic achievement. A survey of the 47 college websites revealed that all study participants hold a doctoral degree.

Similarly, the study methodology required the measurement of the study participants' occupational stress personal coping resources. The results indicate that compared to the normative sample, all study participants scored in the two highest categories (either average or high) on the Recreation and Self-Care subscales. While in the Social Support and Rational/Cognitive Coping subscales, only two participants scored low. The remainder of the participants scored in the average or high category. Also, the mean scores of study population on each of the instrument's subscales exceeded the mean score of the normative sample's mean scores on each of the four personal resources subscales.

Negative Skew of Social Support Subscale

The Social Support subscale histogram indicates a large negative skew which resulted in a distribution curve which was particularly non-normal. As such it violated a key assumption of normality that is necessary for inclusion in regression analysis. Additionally, the Social Support values are distributed much differently than the other variables. The shape of the curve and the high scores suggest that a very large percentage of the study participants gave the highest rating of five to all the items in this particular category. According to Osipow (1998), the Social Support subscale "Measures the extent to which the individual feels support and help from those around him/her" (p. 2). Osipow states that "high scores in this category should be interpreted to

mean that the participant feels that there is at least one person they can count on, one who values and/or loves them." Presumably, these presidents have relationships with understanding people with whom they can discuss work related problems. Although not included in the relationship testing with emotional intelligence, this finding may be very significant to the understanding stress management of the study population.

High Standard Deviation of Self Care Subscale Scores

A large standard deviation for the Self-Care variable was observed (see Table 14). According to Osipow (1998), "High scorers report that they regularly exercise, sleep 8 hours per day, are careful about their diet, practice relaxation techniques, and avoid harmful substances such as alcohol, drugs, tobacco, and coffee" (p. 13). Evidently, there is great variation in how the presidents engage in self-care. The other outcome variables demonstrate much less variability.

Implications and Contributions

The findings of this study provide insight into the association of emotional intelligence and stress management of North Carolina community college presidents. They suggest that that the ability of presidents to control their emotions can boost their adaptive coping capability. By establishing this relationship, the results of this study can contribute theoretically and practically to the maintenance of job effectiveness and organizational effectiveness while preserving health, emotional well being, and quality of life. Accordingly, the following implications and contributions of this study are offered.

1. The results of this study contribute to the body of knowledge of emotional intelligence and stress management models by extending the validation of the Genos-EI Inventory and the OSI-R to the community college president population.

2. The results of this study may enable organizations to identify appropriate selection processes for the hiring of chief executives based upon an improved understanding of the emotional competencies needed to effectively manage stress and increase organizational effectiveness.
3. The results of this study suggest that emotional intelligence is related to enhanced stress management; therefore individuals aspiring to be college presidents would be well served to devote time and effort to understand and improve their emotional intelligence. This study identified critical emotional intelligence skills which could be incorporated into leadership training programs. Moreover, the results of this study could help identify areas for incumbent presidents that need improvement and suggest actions that might be adopted to develop those areas, and at the same time, areas wherein the individual excels can be leveraged to full potential to maximize effectiveness.
4. The information from this study could help increase the understanding relating to presidential mentoring of subordinates who aspire to be college presidents regarding emotional leadership and the occupational stress management process.
5. This research suggests that recreation plays prominent roles in occupational stress management of college presidents and potentially their faculty and staff. Therefore to optimize organizational effectiveness, enhance employee job satisfaction, and improve employee physical and psychological health, college leaders adopt recreation and wellness policies and procedures designed to maximize employee recreational activities. Practical examples might include; providing relief time for participation recreational activities, encouraging participation in club and intramural sports, and

making fitness facilities/equipment available to faculty, staff and their families.

Limitations of the Research

Chapter 3 detailed limitations of this study that may raise doubts regarding the validity and accuracy of this study. For emphasis, the limitations below are reiterated:

1. This study examined the relationship between workplace emotional intelligence and stress management. The cross-sectional design used in this study does not suggest causal relationships. It is necessary to incorporate longitudinal data into the overall study design if a cause-and-effect relationship between variables is desired (Singleton & Straits, 2005).
2. The survey instruments employed in this study incorporated two self-report measures that were constructed on Likert scales that asked respondents for their level of agreement to the truthfulness of the statements. Respondents' unwillingness to admit unfavorable responses may have affected the study results. Although both instruments used in this study, the Genos Emotional Intelligence Inventory and the Occupational Stress Inventory-Revised, have been validated with high reliability and have been successfully used by researchers within various sectors in many countries, the study survey was self-administered and participants' responses were not validated externally.

Recommendations for Future Research

This study investigated the relationship between workplace emotional intelligence and stress management of North Carolina Community college presidents. The intent of this study was to contribute to emotional intelligence and occupational stress management theory and its

application within a higher education setting. In doing so, it provides researchers with additional evidence to support future research.

The following future research suggestions are proffered:

1. It is recommended that the study sample size be increased to ensure that a good representation of the population is explored. Although the sample size of this study is sufficient to produce statistically valid results, and the data and conclusions obtained from this study are useful for benchmarking and replication, increasing the sample size would enhance study validity. Additionally, the generalizability of the findings of this study is constrained due to the constrained size of the study population. Expansion of the study population would facilitate inclusion of other variables that might impact occupational stress and adaptive coping. For example, the literature suggests that demographic characteristics such as age (Sutherland & Cooper, 1995), race/ethnicity (Thompson & Dey, 1998), and gender (Davidson & Fielden, 1999; Oginska-Bulik, 2006), affect stress and adaptive coping. Additionally, the literature suggests that other variables, such as tenure, can affect the way college presidents' deal with occupational stress (Blix, Cruise, Mitchell, & Blix, 1994). Additionally, it is recommended that future studies include community college presidents that are located in geographical regions outside of North Carolina and other senior academic leaders (such as Vice Presidents and Deans). Inclusion of these variables would be valuable to the broader field of higher education.
2. As previously stated, a limitation of this study is that participants' emotional intelligence and stress-management levels are measured through the use of self-report inventories. Self-report inventories, as opposed to direct observation, depend upon

accurate self-perception of study participants. Additionally, social desirability bias and response distortion due to ego defense tendencies may come into play (Sy et al., 2006). Thus, it is recommended that this study be replicated using an alternative study method, such as a qualitative approach, which may positively contribute to the body of research. Alternatively, this study could be replicated, and results compared, using a multi-rater emotional intelligence measure, such as the Goleman ECI test. A multi-rater approach would explore the degree of emotional intelligence in leaders from the subordinate's perspective. Additionally, this study focused exclusively on the relationship of emotional intelligence and stress management; therefore, further research to compare these outcomes to other studies incorporating different methodological procedures and statistical techniques, such as meta-analysis, hierarchical regression, etc, is warranted. Scores derived from an array of methods could increase confidence in study results.

3. Further research could include assess the relationship between emotional intelligence and stress management in additional fields, such as the service industry, retail, military services, or financial institutions.
4. This research suggests that recreation is prominent in the management of occupational stress of community college presidents, and potentially for their faculty and staff. Further research is needed within the higher education setting regarding the potential therapeutic value of recreation.
5. Further research should be conducted on emotional intelligence training programs and their effect on stress management of community college presidents. Many practitioners and scholars believe that emotional intelligence can be cultivated by

coaching and training programs (Cherniss & Caplan, 2001; Clark, Callister, & Wallace, 2003; Kerr, Gavin, Heaton, & Boyle, 2005).

6. Finally, this research could facilitate the development of a stress management model for higher education leaders. Such a model could be used in higher education leadership training programs. Additionally, it could inspire the study of stress management in educational leadership graduate programs.

Summary and Conclusion

Occupational stress has long been associated with negative outcomes for individuals and organizations but current economic conditions have created additional sources of stress in the higher education setting. The literature suggests that physiological and psychological health, as well as job satisfaction and organizational commitment, decrease as a result of occupational stress.

The research question presented at the beginning of this dissertation questioned whether there was empirical evidence to substantiate or support this surmised relationship. This question addressed the need for community college presidents to possess high emotional intelligence in order to effectively cope with the stressors they encounter in their work. This research was needed because prior studies focused on emotional intelligence and stress management individually and have not investigated the inter-correlation between the two.

This chapter presented an analysis of the study findings, as well as implications and contributions to the body of knowledge about emotional intelligence and stress management. The study findings confirm a significant relationship between the emotional intelligence of North Carolina community college presidents and their stress management. A practical implication of this study is that in order to thrive in the current operating environment, higher education leaders

must possess high emotional intelligence. Therefore, for standing presidents emotional intelligence should be promoted as a means to facilitate adaptive coping against the stress that enviably exists in the organizations they lead. For aspiring presidents, emotional intelligence should be cultivated in order to meditate the stress that enviably accompanies the position. For those responsible for the selection of presidents, the emotional intelligence level of candidates should be considered, in order to facilitate organizational success and personal health and wellbeing of the individual.

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APPENDIX A: OPERATIONAL DEFINITIONS

Unless otherwise indicated, definitions used in the Genos Emotional Intelligence Inventory (Gignac, 2008) and the Occupational Stress Inventory Revised Edition (Osipow, 1998) apply.

Adaptive: Refers to the effectiveness of the coping process to improve outcomes for a person such as emotional adjustment, physical health, and sense of well-being (Zeidner & Saklofske, 1996).

Coping: Refers to a one's efforts to manage, control, or regulate a threatening or challenging situation that is viewed as either stressful, overtaxing or challenging to one's personal coping resources (Lazarus & Folkman, 1984).

Coping Resources (CR): Refers to the accumulation of the individual's ability to relieve or reduce the level of occupational stress and "includes recreation, self-care, social support, and rational/ cognitive coping" (Osipow, 1998, p. 1).

Emotion: Refers to personal, internal events that coordinate many psychological subsystems including physiological responses, cognitions, motivational, and experiential systems (Salovey, & Mayer, 1990; Mayer, Caruso, & Salovey, 2000).

Emotional Awareness of Others (EAO): One of the seven orthogonal factors that comprise a general factor (total emotional intelligence) in the Genos EI model. It refers to "the skill of perceiving and understanding others' emotions" (Gignac, 2008, p. 10).

Emotional Expression (EE): One of the seven orthogonal factors that comprise a general factor (total emotional intelligence) in the Genos EI model. It refers to "the skill of effectively expressing one's own emotions" (Gignac, 2008, p. 10).

Emotional Management of Others (EMO): One of the seven orthogonal factors that comprise a general factor (total emotional intelligence) in the Genos EI model. It refers to "the skill of positively influencing the emotions of others" (Gignac, 2008, p.10).

Emotional Reasoning (ER): One of the seven orthogonal factors that comprise a general factor (total emotional intelligence) in the Genos EI model. It refers to "the skill of using emotional information in decision-making" (Gignac, 2008, p. 10).

Emotional Self-Awareness (ESA): One of the seven orthogonal factors that comprise a general factor (total emotional intelligence) in the Genos EI model. It refers to "the skill of perceiving and understanding one's own emotions" (Gignac, 2008, p. 10).

Emotional Self-Control (ESC): One of the seven orthogonal factors that comprise a general factor (total emotional intelligence) in the Genos model of emotional intelligence. It refers to "the skill of effectively controlling your own strong emotions" (Gignac, 2008, p. 10).

Emotional Self-Management (ESM): One of the seven orthogonal factors that comprise a general factor (total emotional intelligence) in the Genos EI model. It refers to "the skill of managing your own emotions" (Gignac, 2008, p. 10).

Emotional Intelligence (EI): Refers to "a cluster of personal and social competencies that include self-awareness and control, motivation and persistence, empathy, and the ability to form relationships" (McCollum & Broadus, 2007, p. 171). It is "The capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships" (Goleman, 1998a, p. 317). It is the ability to perceive and express emotion, assimilate emotion in thought, understand and reason with emotion, and regulate emotion in the self and others (Mayer, Caruso, & Salovey, 1999). It is "a cross-section of interrelated emotional and social competencies, skills and facilitators that determine how

effectively we understand and express ourselves, understand others and relate with them, and cope with daily demands" (Bar-On, 2000, p. 3).

Genos Emotional Intelligence Inventory (Genos EI): Refers to "an emotional intelligence assessment specifically designed for use in the workplace as a learning and development aid for human resource professionals and occupational psychologists involved in the identification, selection and development of employees" (Gignac, 2008, p. 2).

Occupational Stress: Refers to "any discomfort which is felt and perceived at a personal level and triggered by instances, events or situations that are too intense and frequent in nature so as to exceed a person's coping capabilities and resources to handle them adequately" (Malta, 2004).

Occupational Stress Inventory Revised Edition (OSI-R): Refers to "a measure of three dimensions of occupational adjustment: occupational stress, psychological stain, and coping resources. For each of these domains, subscales measure specific attributes for the environment or individual that represents important characteristics of occupational adjustment" (Osipow, 1998, p. 1).

Rational/Cognitive Coping (RC): Refers to a survey scale that "measures the extent to which the individual possesses and uses cognitive skills in the face of work-related stresses" (Osipow, 1998, p. 2).

Recreation (RE): Refers to a survey scale that "measures the extent to which the individual makes use of and derives pleasure and relaxation from regular recreational activities" (Osipow, 1998, p. 2).

Self-Care (SC): Refers to a survey scale that "measures the extent to which the individual regularly engages in personal activities which reduce or alleviate chronic stress" (Osipow, 1998, p. 2).

Social Support (SS): Refers to a survey scale that "measures the extent to which the individual feels support and help from those around him/her" (Osipow, 1998, p. 2).

Stress: Refers to "A state resulting from a stress of bodily or mental tension resulting from factors that tend to alter an existent equilibrium" (Webster, 1996, p. 668).

APPENDIX B: PERMISSION TO USE THE GENOS EI INVENTORY

From: Gilles Gignac <gilles.gignac@genosinternational.com>
To: Richard Gough <goughr@sandhills.edu>
Date: 1/10/2011 2:17 AM
Subject: Re: Request for Genos EI Concise Version
Attachments: Genos EI Book Chapter (2009) Assessing EI.pdf; Genos EI Concise _self_-External.pdf

Dear Richard,

Attached is the concise version of the inventory. The reliabilities were published in a book chapter (attached).

Regards,
Gilles

On Sun, Jan 9, 2011 at 7:37 AM, Richard Gough <goughr@sandhills.edu> wrote:
Dear Dr. Gignac,

Thank you for approving my application and providing a copy of the Genos EI assessment full version for use in my research.

In my dissertation research I intend to use three or maybe four instruments, i.e., the OSI-R for occupational stress measurement, the Genos EI, and a Personal Data Questioner for demographic data collection. I'm concerned about the length of time it will take for study participant to complete the survey. Therefore I was wondering if your concise version might be a viable option to your full version. Would it be possible to obtain a copy of the Genos EI Inventory Concise Version?

Your Technical Manual states that "the Genos EI Concise version has sub-scale score reliability levels that meet only the minimum standards for research. Thus, the Genos EI Concise version is only applicable for research scenarios and possibly educational scenarios." Would it be possible to get the sub-scale score reliability levels?

Thank you in advance for your help.

R/Richard

From: Gilles Gignac [gilles.gignac@genosinternational.com]
Sent: 08 July 2010 06:25
To: Gough, Richard John
Subject: Re: Application for use of Genos EI Inventory for Academic Research Purposes
Dear Richard J. Gough,

Thank you for submitting an application for the purposes of using Genos EI in a research

context. Your application has been accepted. Attached is a pdf version of the Genos EI assessment (Full). Best of luck with your research.

Regards,
Gilles

On Tue, Jul 6, 2010 at 7:11 AM, Gough, Richard John
GOUGHR06@students.ecu.edu> wrote:

Please find my application attached. Thank you.

Richard J. Gough
W (910) 695-3703
C (910) 638-5170

APPENDIX C: PERMISSION TO USE THE OSI-R INVENTORY

From: Vicki McFadden <vmark@parinc.com
Date: 2/25/ 2011 3:13 PM
To: Richard Gough <goughr@sandhills.edu>
Subject: RE: License Agr for OSI-R
Attachments: Mime.822 (28 KB) [View] [Save As]

Rich,

Thank you for letting me know that you've received approval.

By way of this e-mail, PAR is extending your License Agreement until April 30, 2011.

When you have your survey ready for administration, please forward a print screen that displays the required PAR Credit Line to comply with paragraph (8) of your License Agreement. You can begin administering the OSI-R as soon as your website is ready.

Please let me know if you have any questions.

Have a great day!

Vicki McFadden
Permissions Specialist
vmark@parinc.com

Psychological Assessment Resources, Inc.
16204 N. Florida Avenue
Lutz, FL 33549
www.parinc.com
Phn: (800) 331-8378
Fax: (800) 727-9329; Intl Fax: (813) 449-4109

From: Richard Gough [mailto:goughr@sandhills.edu]
Sent: 2/25/ 2011 1:58 PM
To: Vicki McFadden
Cc: Richard Gough
Subject: RE: License Agr for OSI-R

Vicki -

I've been cleared by my dissertation committee and by the university IRB group to send out my surveys. I plan to do so in the next couple of weeks. Will you extend my OSI-R License Agreement until April 30, 2011?

Thank you.
R/Rich

From: Richard Gough [mailto:goughr@sandhills.edu]
Sent: 2/ 04/ 2011 2:11 PM
To: Vicki McFadden
Cc: goughr@ecu.edu
Subject: Re: License Agr for OSI-R

Vicki -

I do not have approval from my dissertation committee to send my out surveys (which contain the OSI-R) and I don't expect to get that approval for at least 3 weeks. So I need to extend the License Agreement. Can it be extended to the end of April 2011? Thanks

R/Richard

From: Vicki McFadden vmark@parinc.com
Date: 1/25/2011 10:32 AM
To: Richard Gough <goughr@sandhills.edu>
Subject: License Agr for OSI-R
Attachments: Gough OSI-R.pdf (197 KB) [View] [Open] [Save As]

Please find attached your fully executed License Agreement.

When you have your survey ready for administration, please forward a print screen that displays the required PAR Credit Line to comply with paragraph (8) of your License Agreement. You can begin administering the OSI-R as soon as your website is ready.

Your License Agreement will expire on February 28, 2011. Please contact me if you need an extension for your research or any additional administrations.

If you have any questions, please feel free to contact me.

Sincerely,

Vicki McFadden
Permissions Specialist
vmark@parinc.com

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APPENDIX D: SURVEY ITEMS

Occupational Stress Inventory - Revised Edition™
Personal Resources Questionnaire

Below are a series of 40 statements. For each statement please select the number that fits you best.

1 = Rarely or never true
2 = Occasionally true
3 = Often true
4 = Usually true
5 = True most of the time

1	When I need a vacation I take one.	1	2	3	4	5
2	I am able to do what I want to do in my free time.	1	2	3	4	5
3	On weekends I spend time doing the things I enjoy the most.	1	2	3	4	5
4	I hardly ever watch television.	1	2	3	4	5
5	A lot of my free time is spent attending performances (e.g., sporting events, theater, movies, concerts etc.)	1	2	3	4	5
6	I spend a lot of my free time in participant activities (e.g., sports, music, painting, woodworking, sewing, etc.)	1	2	3	4	5
7	I set aside time to the things I really enjoy.	1	2	3	4	5
8	When I'm relaxing, I frequently think about work.	1	2	3	4	5
9	I spend enough time in recreational activities to satisfy my needs.	1	2	3	4	5
10	I spend a lot of my free time on hobbies (e.g., collections of various kinds, etc.)	1	2	3	4	5
11	I am careful about my diet (e.g., eating regularly, moderately, with good nutrition in mind).	1	2	3	4	5
12	I get regular physical checkups.	1	2	3	4	5
13	I avoid excessive use of alcohol.	1	2	3	4	5
14	I exercise regularly (at least 20 minutes, 3 times a week).	1	2	3	4	5
15	I practice "relaxation" techniques.	1	2	3	4	5
16	I get the sleep I need.	1	2	3	4	5

17	I avoid eating or drinking things I know are unhealthy (e.g., coffee, tea, cigarettes, etc.)	1	2	3	4	5
18	I engage in meditation.	1	2	3	4	5
19	I practice deep breathing exercise a few minutes several times each day.	1	2	3	4	5
20	I floss my teeth regularly.	1	2	3	4	5
21	There is at least one person important to me who values me.	1	2	3	4	5
22	I have help with tasks around the house.	1	2	3	4	5
23	I have help with the important things that have to be done.	1	2	3	4	5
24	There is at least one sympathetic person with whom I can discuss my concerns.	1	2	3	4	5
25	There is at least one sympathetic person with whom I can discuss my work problems.	1	2	3	4	5
26	I feel I have at least one good friend I can count on.	1	2	3	4	5
27	I feel loved.	1	2	3	4	5
28	There is a person with whom I feel really close.	1	2	3	4	5
29	I have a circle of friends who value me.	1	2	3	4	5
30	If I need help at work, I know who to approach.	1	2	3	4	5
31	I am able to put my job out of my mind when I go home.	1	2	3	4	5
32	I feel that there are other jobs I could do besides this my current one.	1	2	3	4	5
33	I periodically reexamine or reorganize my work style and schedule.	1	2	3	4	5
34	I can establish priorities for the use of my time.	1	2	3	4	5
35	Once they are set, I am able to stick to my priorities.	1	2	3	4	5
36	I have techniques to help avoid being distracted.	1	2	3	4	5
37	I can identify important elements of problems I encounter.	1	2	3	4	5
38	When faced with a problem I use a systematic approach.	1	2	3	4	5
39	When faced with the need to make a decision I try to think through the consequences of choices I might make.	1	2	3	4	5
40	I try to keep aware of important ways I behave and the things I do.	1	2	3	4	5

Genos Emotional Intelligence Inventory – Concise

Below are a series of 31 statements. Please select the number corresponding to the statement that is most indicative of the way you typically think, feel, and act at work.

1 = Almost Never

2 = Seldom

3 = Sometimes

4 = Usually

5 = Almost Always

1	I demonstrate to others that I have considered their feelings in decisions I make at work.	1	2	3	4	5
2	I fail to recognize how my feelings drive my behavior at work.	1	2	3	4	5
3	I respond to events that frustrate me appropriately.	1	2	3	4	5
4	I find it difficult to identify my feelings on issues at work.	1	2	3	4	5
5	I express how I feel to the wrong people at work.	1	2	3	4	5
6	I fail to handle stressful situations at work effectively.	1	2	3	4	5
7	When someone upsets me at work I express how I feel effectively.	1	2	3	4	5
8	I consider the way others may react to decisions when communicating them.	1	2	3	4	5
9	When I get frustrated with something at work I discuss my frustration appropriately.	1	2	3	4	5
10	When I am under stress I become impulsive.	1	2	3	4	5
11	I fail to identify the way people respond to me when building rapport.	1	2	3	4	5
12	I understand the things that make people feel optimistic at work.	1	2	3	4	5
13	I take criticism from colleagues personally.	1	2	3	4	5
14	I am effective in helping others feel positive at work.	1	2	3	4	5
15	I communicate decisions at work in a way that captures other's attention.	1	2	3	4	5
16	I gain stakeholders' commitment to decisions I make at work.	1	2	3	4	5
17	I appropriately communicate decisions to stakeholders.	1	2	3	4	5
18	I express how I feel at the appropriate time.	1	2	3	4	5
19	I understand what makes people feel valued at work.	1	2	3	4	5
20	I effectively deal with things that annoy me at work.	1	2	3	4	5
21	I appropriately respond to colleagues who frustrate me at work.	1	2	3	4	5
22	I find it difficult to identify the things that motivate people at work.	1	2	3	4	5
23	I fail to keep calm in difficult situations at work.	1	2	3	4	5
24	I am aware of my mood state at work.	1	2	3	4	5
25	I help people deal with issues that cause them frustration at work.	1	2	3	4	5
26	I remain focused when anxious about something at work.	1	2	3	4	5
27	I fail to resolve emotional situations at work effectively.	1	2	3	4	5
28	I am aware of how my feelings influence the decisions I make at work.	1	2	3	4	5
29	I have trouble finding the right words to express how I feel at work.	1	2	3	4	5
30	When upset at work I still think clearly.	1	2	3	4	5
31	I don't know what to do or say when colleagues get upset at work.	1	2	3	4	5

APPENDIX E: EMAIL LETTER OF INVITATION

From: Richard Gough Thursday - February 24, 2011 9:34 AM
To: CC Presidents
Subject: Your Assistance Please

Dear College President,

I am currently completing my doctorate in Educational Leadership through East Carolina University. I am also the Vice President of Business and Administrative Services at Sandhills Community College, one of your sister institutions. I need your help!

For my dissertation, I am conducting research concerning emotional intelligence and its impact on stress management of North Carolina community college presidents. Little research has been conducted on this subject. As you are well aware our colleges are facing a myriad of challenges including: enrollment surge, fiscal retrenchment, intense external scrutiny, and increased accountability. Exacerbated by the lagging economy, these challenges induce stress on all college personnel, but especially upon college presidents.

Within the next week, you will receive an internet based survey containing two instruments: 1) the 31- question Genos Emotional Intelligence inventory, and 2) the 40-question Occupational Stress Inventory. It should take no more than twenty minutes to complete this survey. All information will be held confidential.

By completing these instruments, you will be contributing to research related to academic leaders in North Carolina and assisting a North Carolina administrator in gathering data related to his dissertation.

Please assist me in this research effort.

Cordially,

Richard J. Gough
Vice President for Business and Administrative Services
Sandhills Community College
3395 Airport Road
Pinehurst, NC, 28374
(910) 695-3703

APPENDIX F: EMAIL REQUEST TO COMPLETE ON LINE SURVEY

From: Richard Gough Wednesday – March 2, 2011 10:14 AM
To: CC Presidents
Subject: Request to Complete On Line Survey

Dear College President,

Recently you received an email from me that solicited your participation in a doctoral study that I am conducting regarding emotional intelligence and its impact on stress management of North Carolina community college presidents. This second email is a request for you to complete the online survey.

To begin the survey, click this link: www.zoomerang.com. Instructions for completing the survey will appear once the web page is loaded. Your responses will be forwarded electronically to me when you complete all questions and enter submit. Please know that survey results will only be reported as aggregate data, and individual responses will be kept confidential. Also, please understand that survey completion is voluntary, although your participation will enhance the quality of the study and perhaps influence trends in higher education.

Thank you in advance for assisting me in the completion of this research effort.

Cordially,

Richard J. Gough
Vice President for Business and Administrative Services
Sandhills Community College
3395 Airport Road
Pinehurst, NC, 28374
(910) 695-3703

APPENDIX G: FOLLOW-UP EMAIL

From: Richard Gough Wednesday - March 9, 2011 12:49 PM
To:
BC: goughr@sandhills.edu
Subject: Dissertation Survey Response Request

Dear Dr.

Recently, you received an email that solicited your participation in a doctoral study that I am conducting regarding emotional intelligence and its impact on stress management in the role of North Carolina community college presidents. Currently, there is little state or national data related to this topic.

If you have chosen to participate in this project, won't you please take a few minutes to complete the on-line survey? Instructions for completing the survey will appear once the first page of the survey is loaded.

Please know that survey results will only be reported as aggregate data, and individual responses will be kept confidential.

I know how busy you are so thank you in advance for assisting me in the completion of this research effort.

(Click the link below to begin)

http://www.zoomerang.com/Survey/WEB22B7FSSVWX2

Cordially,

Richard J. Gough
Vice President for Business and Administrative Services
Sandhills Community College
3395 Airport Road
Pinehurst, NC, 28374
(910) 695-3703

APPENDIX H: THANK YOU EMAIL

From: Richard Gough Tuesday - March 15, 2011 1:38 PM
To:
BC: goughr@sandhills.edu
Subject: Appreciation

Dear Dr.

Thank you for your participation in my research study "Stress Management of North Carolina Community College Presidents: The Influence of Emotional Intelligence." The information you have provided will contribute to an area of much needed research related to presidential leadership.

Once the dissertation is complete I would be happy to provide you with an electronic copy. If you would like to receive an electronic copy of the completed dissertation please reply to this email and I will be happy to send you one.

Again, thank you for assisting a fellow North Carolina community college administrator in gathering data related to his dissertation.

Cordially,

Richard J. Gough
Vice President for Business and Administrative Services
Sandhills Community College
3395 Airport Road
Pinehurst, NC, 28374
(910) 695-3703

APPENDIX I: INSTITUTIONAL REVIEW BOARD APPROVAL LETTER

EAST CAROLINA UNIVERSITY
University & Medical Center Institutional Review Board Office
1L-09 Brody Medical Sciences Building• 600 Moye Boulevard • Greenville, NC 27834
Office 252-744-2914 • Fax 252-744-2284 • www.ecu.edu/irb

Date: February 18, 2011
Principal Investigator: Richard Gough, Doctoral Student
Dept./Ctr./Institute: College of Education
Mailstop or Address: 3130 Seven Lakes W., West End, NC 27376
RE: **Exempt Certification**
UMCIRB# **11-0130**
Funding Source: Unfunded

Title: "Stress Management of North Carolina Community College Presidents: The Influence of motional Intelligence"

Dear Mr. Gough:

On 2.16.11, the University & Medical Center Institutional Review Board (UMCIRB) determined that your research meets ECU requirements and federal exemption criterion #2 which includes research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects and any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

It is your responsibility to ensure that this research is conducted in the manner reported in your Internal Processing Form and Protocol, as well as being consistent with the ethical principles of the Belmont Report and your profession.

This research study does not require any additional interaction with the UMCIRB unless there are proposed changes to this study. Any change, prior to implementing that change, must be submitted to the UMCIRB for review and approval. The UMCIRB will determine if the change impacts the eligibility of the research for exempt status. If more substantive review is required, you will be notified within five business days.

The UMCIRB Office will hold your exemption application for a period of five years from the date of this letter. If you wish to continue this protocol beyond this period, you will need to submit an Exemption Certification Request at least 30 days before the end of the five year period.

Sincerely,

Chairperson, University & Medical Center Institutional Review Board
Pc: Dr. Sandra Seay