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College Student Mental Health: The Relationship Between Depression and Emotional Intelligence Using the Student Relationships Assessment

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COLLEGE STUDENT MENTAL HEALTH: THE RELATIONSHIP BETWEEN
DEPRESSION AND EMOTIONAL INTELLIGENCE USING THE STUDENT
RELATIONSHIPS ASSESSMENT

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DEPRESSION AND EMOTIONAL INTELLIGENCE USING THE STUDENT
RELATIONSHIPS ASSESSMENT

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Education in Higher Education

By

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ABSTRACT

The purpose for conducting this study was to investigate the relationship between emotional relational intelligence (ERQ) and depression in college students. The significance of this study is based on the additional support that can be provided to students with increased information and understanding of emotional relational intelligence and depression. In an effort to help college students achieve their educational goals and aspirations, the researcher suggests that emotional relational intelligence can be beneficial. The relationship between depression and emotional relational intelligence may provide insight on how to support and care for college students who are struggling with depressive symptomology.

The results of the study indicate a statistically significant negative moderate correlation between emotional relational intelligence and depression in the population of students who completed the Student Relationships Assessment in fall 2009 and fall 2010; a statistically significant negative moderate correlation between emotional management and depression in the population of students who completed the Student Relationships Assessment in fall 2009 and fall 2010; and statistically significant negative, yet weak, correlation between emotion perception and depression in the population of students who completed the Student Relationships Assessment in fall 2009 and fall 2010. Furthermore, the study indicated that there was a significant statistical difference between the depression scores of males and females in the population of students who completed the Student Relationships Assessment in fall 2009 and fall 2010. There was no statistical difference between the emotional relational intelligence scores of males and females in

the population of students who completed the Student Relationships Assessment in fall

2009 and fall 2010.

This dissertation is approved for
Recommendation to the
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CHAPTER I

INTRODUCTION

The college experience is one of the most anticipated and memorable times in an individual's life. During this time university students experience numerous developmental changes (Grayson, 2006; Chickering & Reisser, 1994; Astin, 1993). Traditional aged college students, typically 18 – 24 years old, are in a transitional point in their lives as they leave adolescence and enter early adulthood. In the context of greater autonomy and independence, the transition is challenging and difficult as individuals seek to navigate changes that are presented.

In the midst of the many changes that college students encounter, three are traditionally viewed as paramount: separation from family, development of mature and intimate relationships, and formulation of identity (Grayson, 2006; Chickering & Reisser, 1994). As they head off to college, students are often taking part in the final steps of separation from their parents. In recent years, the proliferation of communication technology and its heavy usage has introduced new aspects to this separation and move toward autonomy (Cutright, 2008; Manos, 2009; Coburn, 2006), but it continues to be a significant developmental step. Moreover, as college students are experiencing the adjustments of family separation they are also working to develop new meaningful and intimate personal relationships. Friendships and romantic interests play significant roles in the development of college students. In the last few years, there has been much written on how college students have engaged in "hook-up" relationships that have been detrimental to their emotional and mental states (Bogle, 2008; Sessions-Stepp, 2007). Finally, college students face important identity formation issues and foundational

questions such as "who am I?" and "where do I belong?" (Grayson, 2006). Issues of sexuality, careers, politics, religion, cultural affiliations, and academics are all part of an individual's identity, and these issues confront college students in their transition. As they journey through the college years, these development challenges can be very dramatic.

Context of the Problem

As college students face important developmental stages they also experience a number of mental health stressors that develop during the college years. Academic difficulties, social relationships, self-care decisions, financial issues, loneliness, and general life changes are some of normal life adjustment issues that surface in college (Kadison & DiGeronimo, 2004; Levine & Cureton, 1998). These stressors are normal; however, in addition to the developmental stages they tend to provide a significant amount of stress and anxiety for students.

When students experience difficulty with developmental changes and normal issues of adjustment, universities and colleges have numerous resources to support and care for students. Institutions have student affairs practitioners, counseling professionals, and academic support specialist in place to work with students. For example, university counseling services provide readily available treatment options for students with mental health difficulties. Some of the options include individual therapy and group counseling. These counseling services are often free of charge or offered at a minimal cost. The key for universities is to be strategic in the marketing of the services and to inform students of the availability (Kitrow, 2003; Mowbray, Megivern, Mandiberg, Strauss, Stein, Collins, et al., 2006). In addition to counseling many students are also able to utilize recent

medical advances in pharmacological medicine in order to cope with mental health disorders and be more successful (Barr, Rando, Krylowicz, & Winfield, 2010; Gallagher, 2009). Student affairs and academic affairs professionals are available to provide vital, on-going daily support to students, but institutions need to be proactive in making students aware of the services.

There are also college students who, along with facing developmental challenges and normal adjustment issues, encounter more significant mental health concerns. For example, these psychological issues include mood disorders (depression, dysthymia, and bipolar), personality disorders (obsessive-compulsive, antisocial, narcissism, schizophrenia), and suicide to name a few. For the purpose of this research unipolar depression will be the sole focus. Depression is the mental health disorder that college students most often experienced (Ciarrochi, Deane, & Anderson, 2002; Akiskal, 2005). According to the DSM-IV-TR, depression is a depressed mood and loss of interest in most of life for a period of two weeks or longer (APA, 2000). This is differentiated from short periods of feeling down or "blue" for few hours or a day. Depression also includes other symptoms and exhibits high rates of comorbidity with other disorders (Dozois & Westra, 2004). Specifically, depression and anxiety show high positive correlations with research identifying a comorbidity rate of over 50% (Dozois & Westra). These psychological difficulties, in addition to the developmental and normal life stressors, can create a significant burden for students.

Today, students dealing with psychological issues are taking part in post-secondary education in greater numbers (Klerman & Weissman, 1989; Benton, Robertson, Tseng, Newton, & Benton, 2003; Pledge, Lapan, Heppner, Kivlighan, &

Roehlke, 1998; Mowbray, Megivern, Mandiberg, Strauss, Stein, Collins, et al., 2006;

Twenge, Gentile, DeWall, Ma, Lacefield, & Schurtz, 2010). In a longitudinal study of

college students, Benton et al. (2003) showed that the number of counseling center clients

with mental health difficulties increased over three five-year segments. For example,

depression increased from 21.1% of the clients in the first time period to 34.5% of clients

in the second time period to 40.7% of clients in third time period. In a similar study,

Cornish, Riva, Henderson, Kominars, and McIntosh (2000) reviewed counseling center

client files for five academic years to determine if there was an increase in the number of

clients with mental health disorders. They found a significant difference between two of

the years but there was not a significant difference across all five years. Even with the

inconsistent differences between the years, the research still showed evidence of an

increase in students struggling with mental health disorders. According to Mowbray et al.

(2006), "[e]pidemiological studies indicate that the part-year prevalence rate of mental

illness (i.e., meeting criteria for a psychiatric diagnosis) is highest (39%) for youth in the

age category of 15-21 years old-corresponding to the traditional college years" (p. 227).

These studies recognize the realities of college students with mental health issues and the

need for universities to care for them.

Moreover, not only is the number of students with mental health issues increasing,

but the total number of students enrolling in institutions of higher education is increasing.

According to the US Department of Education, 15,600,000 students were enrolled in

undergraduate higher education in 2007 (NCES, 2010a). This is an increase of over five

million undergraduate students since 1985. According to the DSM-IV-TR, depression

lifetime prevalence rates range from 10% to 25% for women and 5% to 12% for men

(APA, 2000). This means the number of undergraduate college students dealing with depression may be between 1,100,000 and 3,000,000 students. Thus, not only has the total number of undergraduates increased dramatically but the percentage of the undergraduate population with mental health issues has also increased. The increase in overall student enrollment will continue to influence the number of students with mental health issues which in turn will impact the academic and relational difficulties that campus officials face in working with students with psychological disorders.

In addition to the increased number of students who are experiencing serious mental issues, there is also an increase in the severity of the issues (Benton et al., 2003; Pledge et al., 1998). Beginning in the early 1990's, Kitzrow (2003) recognized an increasing shift in the time licensed mental health professionals spend addressing student psychopathology. University counseling center directors recognized this shift as well. Gallagher (2009) produced an annual survey of counseling center directors addressing the current trends in counseling centers. The survey documented that more students are being referred for psychiatric services and some student's impairment prevented them from continuing with their educational pursuits or at a minimum required extensive psychological/psychiatric support in order to be successful.

Statement of Purpose

The purpose for conducting this study was to investigate the relationship between emotional relational intelligence (ERQ) and depression in college students. In an effort to support and care for college students with significant mood disorders, research concerning the possible connection and relationship of ERQ and depression is needed. As

more students with mental health issues enroll in post secondary institutions and students continue to develop mental health issues during college, methods to address the correlation between ERQ and depression is useful (Brackett, Mayer, & Warner, 2004). The student who experiences mental health problems needs to be supported with intentional institutional efforts. These efforts are important for their success in college. Moreover, the greater institutional community must also be aware of the needs and issues of students with mental health difficulties in order to provide a holistic approach for the individual student and the campus as a whole.

Furthermore, research that seeks to discover avenues to predict depression or demonstrate causal effects would help advance the support and care of students with mental health disorders. If students with higher ERQ are better able to understand and regulate their emotions, it would be advantageous for institutions to advocate initiatives to develop ERQ in students (Schutte, Malouff, Simunek, McKenley, & Hollander, 2002). This study sought to extend the research concerning the relationship between depression and ERQ.

The purpose of this study was to investigate the relationship between unipolar depression and emotional relational intelligence and the implications for higher education. It is believed that a further understanding of unipolar depression and emotional relational intelligence will provide vital support for college students who struggle with depression and mental health issues.

Statement of Research Questions

1. To what extent is there a relationship between emotional relational intelligence and depression in college students?

2. To what extent is there a relationship between depression and perception of emotions?

3. To what extent is there a relationship between depression and emotional management?

4. Is there a statistically significant difference between depression scores for males and females?

5. Is there a statistically significant difference between emotional relational intelligence scores for males and females?

6. What is the state of mental health in college students?

Definition of Key Terms

Depression- Depression, clinically labeled as Major Depressive Disorder, is represented by a marked change in a person's habitual functioning with symptoms that recur in a periodic or cyclical fashion (Akiskal, 2005). It is identified as either depressed mood or the loss of interest or pleasure in nearly all activities for a period of at least two weeks. Moreover, to be considered depressed, an individual must also experience at least four additional symptoms drawn from a list that includes changes in appetite or weight, sleep, and psychomotor activity; decreased energy; feelings of worthlessness or guilt; difficulty thinking, concentrating, or making decisions; or recurrent thought of death or suicidal ideation, plans, or attempts (APA, 2000). Depression involves either clinically significant distress or some interference in social, occupational, or other important areas

of functioning (APA, 2000). This research will only consider unipolar depression which excludes manic, mixed, or hypomanic episodes and disorders.

Dysthymia– Dysthymia is a chronically depressed mood that occurs for most of the day, more days than not, for at least two years. It is a less intense, intermittent, and enduring depressive condition (Akiskal, 2005). Individuals with dysthymia disorder describe their mood as sad or "being down in the dumps." During depressed mood, at least two the following additional symptoms are present: poor appetite or overeating; insomnia or hypersomnia; low energy or fatigue; low self-esteem; poor concentration or difficulty making decisions; and feelings of hopelessness. (APA, 2000)

Emotional Relational Intelligence (ERQ)- ERQ concerns the skill, ability, and competency that an individual possesses to interpret emotions. An individual's emotional intelligence includes both intrapersonal and interpersonal aspects. An emotional relational intelligent person is aware of and manages his/her own emotions and is aware of and manages others' emotions. ERQ involves the ability to perceive or identify emotions, understand the emotions, and then manage or regulate emotions, empathy, conflict management, and anger management (Oliver, 2009). The term emotional relational intelligence (ERQ) will be used in context with the Student Relationships Assessment but emotional intelligence (EI) will be used when addressing the overall field and study of interpersonal and intrapersonal emotional identification and management.

Student Relationships Assessment– The SRA is a valid and reliable survey instrument that measures emotional, relational, and spiritual aspects of college students. (Center for Relationship Enrichment, 2010). The total ERQ scale Cronbach's alpha of internal consistency was .93 (Center for Relationship Enrichment, 2010). The SRA is an

88-item assessment that measures emotional relational intelligence (ERQ) using 12 subscales. In addition to the 88-items the instrument includes a test bank of questions measuring eating habits, depression, sexual experiences, drug and alcohol use, money management as well as other areas. (Center for Relationship Enrichment, 2010). The mean score on the 88 questions, measured on a 5-point Likert scale, was used to measure emotional relational intelligence. The SRA is divided into 12 subscales that measure ERQ. To measure perception of emotions, the mean score of the emotional self-awareness subscale was used. This subscale is made up of seven questions measured on a 5-point Likert scale. To measure emotional management the mean score of the emotional self-management subscale was used. This subscale consists of six questions measured on a 5-point Likert scale. To measure depression, five lifestyle practice demographic questions which measure depressive vulnerabilities based on the DSM-IV-TR (APA, 2000) were used. These five questions were sum scored to form a depressive vulnerability subscale. The depressive vulnerability subscale is measured on a 9-point frequency scale. The depression vulnerability scale's Cronbach's alpha of internal consistency was .84.

Faith-based institution- A faith based institution is educationally and philosophically founded on a religious belief or affiliation. According to the National Center for Education Statistics, in the fall of 2008 there were 895 religiously affiliated institutions of higher education (NCES, 2010b). There is wide diversity in the religious beliefs but the institutions most generally can be described as private, liberal arts colleges with a religious paradigm. The institutions in this study were part of the Council for Christian Colleges and Universities (CCCU), which include 109 member institutions in

the US and Canada. CCCU member institutions are primarily four-year comprehensive schools with a strong commitment to Christ-centered higher education and full regional accreditation.

Licensed mental health professional- Throughout the course of this paper, the term licensed mental health professional includes licensed social worker, licensed professional counselor, licensed psychologist, and licensed psychiatrist.

Assumptions

In this study, the researcher has made the assumption that an individual's vulnerability to depression was measured by the SRA. Similar to other nationally recognized instruments (e.i., ACHA-NCHA, 2010), the SRA asks respondents to indicate whether they are depressed, stressed out, hopeless, dissatisfied, and lonely. While affirmative self-reports to these questions concerning depression do not indicate that the respondent meets a clinical diagnosis for depression they do demonstrate depression symptoms and vulnerabilities. To be diagnosed with Major Depressive Disorder, an individual would need to meet the specific criteria outlined in the DSM-IV-TR (APA, 2000) and be assessed by a licensed mental health professional. For this research, positive responses to the depressive vulnerability scale questions assumed depression vulnerability.

The researcher has made the assumption that emotional intelligence, named emotional relational intelligence (ERQ), was measured by the SRA. The SRA is one of many instruments that assesses EI. It is a valid and reliable self-report instrument that surveys students on their emotional understanding and awareness along with their actions based on emotions (Center for Relationship Enrichment, 2010).

A final assumption that the researcher made in this study was that ERQ and other studies on emotional intelligence measure social and psychological awareness and competence. There is wide research on the topic of EI presented in the related literature. This study is based on the assumption that ERQ is directly related to an individual's intrapersonal and interpersonal functioning.

<div align="center">Delimitations and Limitations</div>

A limitation of this study was that the SRA has only been administered at one type of institution. For this study, the responses from the SRA administration at nine private, faith-based institutions across the nation are used. This factor will limit the ability to make generalizations to all other institution types as there may be variance in the results due to a student's choice to attend a private, faith-based institution. The type of student who chooses to attend a private faith-based institution could possibly bias the survey response. Therefore, caution should be used with making generalizations to all undergraduate students at all types of institutions.

A second limitation was the type of instrument used to collect the data. As a self-report survey instrument, the SRA is based on the information that the test taker provides. A self-report instrument is open to some deficiency in that the responses are vulnerable to social desirability motives and may reflect perception rather than reality (Goldenberg, Matheson, & Mantler, 2006). Furthermore, there has been criticism that self-reported abilities correlate in small ways with actual abilities and also overlap with personality (Davis, Stankov, & Roberts, 1998). However, research supports that self-reported EI scores do have incremental validity and account for unique variance not otherwise measured by personality (Saklofske, Austin, & Minski, 2003).

A delimitation of this study was the specific focus on unipolar depression as one piece of college student mental health. The mental health of college students is a vast and complex subject. Depression is one diagnostic category of mental health. There are many other areas that may interact with emotional intelligence but this study specifically highlighted unipolar depression in college students.

Significance of the Study

The significance of this study was ultimately found in the help it can provide college students and institutions to achieve their educational goals and aspirations. The relationship between depression and emotional relational intelligence may provide insight on how to support and care for college students who are struggling with depressive symptomology. It is possible that as the relationship is recognized and understood that these students may benefit from initiatives that strengthen their EI and help with their mental health issues.

The author posits that ERQ is valuable in working with college students with psychological issues. Downey et al. (2008) stated that "EI intuitively offers a window into mental health, since the ability of individuals to understand their own emotional states or emotional problems is considered an important indicator of healthy mental functioning" (p. 94). ERQ interventions that may help mitigate depression vulnerabilities are valuable as there is some evidence that emotional management skills are amenable to development. As students grow in their understanding and management of emotions and the emotions of others, there is good evidence that their emotional well-being and functioning will improve as well (Martinez-Pons, 1998; Ciarrochi, Scott, Deane & Heaven, 2003; Hertel, Schutz, & Lammers, 2009). For students struggling with mental

health and depression issues advances in their ERQ could prove beneficial for their mental health difficulties.

Additionally, university licensed mental health professionals can benefit from greater insight into the relationship between depression and ERQ. Ciarrochi and Scott (2006) reported that "emotional competence measures may be of benefit to counselors, in that they can help the counselor to identify client strengths and weaknesses and can provide feedback on how the client is improving" (p. 231). As a licensed mental health professional works with a student client, the ERQ measure may provide another window into the student's functioning. This added information may be beneficial in helping the student in their academic endeavors. Moreover, the ERQ measure give licensed mental health professionals an additional tool to assist the student in their successful navigation through the college experience.

This study also benefits student affairs practitioners in their work with college students. It aids student affairs staff in providing information and programmatic efforts to support students struggling with mental health issues in residential and classroom settings. The residence life staff is often on the frontline working with students who struggle with various levels of emotional and psychological distress. Research on the relationship between depression and ERQ will provide possible programmatic strategies to benefit students living in residence halls. For example, this research may benefit student affairs professionals in addressing roommate difficulties. Moreover, as student affairs professionals have regular interaction with students, they can serve as informal resources and direct students to licensed mental health professionals when they observe students with ERQ skills that may indicate some mental health issues.

Finally, institutions of higher education and the nation in general, will also benefit from research on the relationship between depression and ERQ. Mental health impacts an individual's well being, academic success, and relationships. As mental health problems often surface and develop during the college age, universities are in a position to address and support these students in their education and positively impact the workforce and nation (Eisenberg et al., 2007).

Conceptual Framework of the Study

This study was based on the conceptual framework of Daniel Goleman's research and writing on emotional intelligence (EI) (Goleman, 1995; Goleman, 2001) as well as the theory of EI developed by Mayer, Salovey, Caruso, & Sitarenios (2001). These works recognize the role emotions play in individuals and their relationships. The competency and ability that an individual possesses in relation to their emotions has an impact on their personal and social functioning. The framework for this study rested on the understanding that EI has four dimensions (Goleman, 1995). The four dimensions are arranged in two spheres: intrapersonal and interpersonal. The intrapersonal sphere involves a self-awareness and self-management dimension. The interpersonal sphere contains a social awareness and management dimension. These four dimensions form the theoretical framework for ERQ.

In addition, this study of ERQ was based on the theory that individuals can improve or learn ERQ abilities and that ERQ increases with age (Goleman, 1995; Mayer, Salovey, Caruso, & Sitarenios, 2001). These developmental aspects of ERQ are the basis for much of the attention that researchers, business leaders, and media representatives have given to ERQ. It is held that because an individual can become stronger in their

ERQ abilities that ERQ has profound value in accounting for an individual's success (Goleman 1995; Goleman, 2001). This study was predicated on the theory that an individual can learn or improve their ERQ which in turn will positively impact overall personal and relational functioning.

Finally, this study relied on the premise that ERQ aids in psychological functioning. An individual's ability in the intrapersonal and interpersonal spheres of ERQ impacts their emotional and mental states. Goleman stated, "indeed, keeping our distressing emotions in check is the key to emotional well-being" (1995, p. 56). The greater the ERQ ability or competency of an individual the less likely they will struggle with mental health disorders (Downey et al., 2008; Ciarrochi, Scott, Deane, & Heaven, 2003). Recognizing this connection, this study considered the relationship between ERQ and depression in college students as measured by the SRA.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

The purpose of this study was to investigate the relationship between emotional relational intelligence and depression in college students. This chapter examines the relevant literature concerning this topic. First, the literature on emotional intelligence (EI) is reviewed. A brief history of intelligence is given to provide a background for the development of EI. EI is then specifically explored with focus on the multiple perspectives, definitions, and concepts. Moreover, the various methods of measurement and evaluation of EI are identified and reviewed. The second section provides an overview of the literature on college student mental health. Understanding the general landscape of college student mental health is beneficial in understanding the specific issues of depression. This overview is done with particular focus on college students. More specifically, the literature concerning rates and severity of depression in college students is considered. Finally, the literature concerning the interrelatedness of EI and depression is reviewed.

The libraries at the University of Arkansas, Fayetteville and John Brown University were used to locate and retrieve relevant literature. Both libraries were used in providing books related to the subject. Articles were retrieved through John Brown University interlibrary loan and the University of Arkansas online library databases, including Ebsco Academic Search Premire, ProQuest Direct, ProQuest Digital Dissertations, PsycINFO, and InfoLinks. Keywords for locating materials included depression, mental health, college students, EI, and undergraduate students.

Literature was limited to 1989 to date, with some exceptions as needed to explore certain topics, and to peer reviewed, scholarly journals and books. Many sources were identified through reference pages of relevant articles. There were also web sites that were helpful in providing and locating information on college student depression and EI.

Emotional Intelligence

The term emotional intelligence (EI) was first used in the early 1990s in two articles (Mayer & Salovey, 1993; & Salovey & Mayer, 1990). However, for a wider perspective on EI it is helpful to review two resources from earlier dates. Over 80 years ago, Thorndike (1920) identified three intelligences: mechanical, abstract, and social. Thorndike wrote about the diversity of intelligence that humans possess and sought to bring clarity to the dialogue between these differing types of intelligence. In defining social intelligence, Thorndike stated, that it was "the ability to understand and manage men and women, boys and girls-to act wisely in human relation" (1920, p. 228). The idea of a "social" intelligence as the ability to manage others is very similar to what Salovey and Mayer (1990) developed decades later which was called EI (Newsome, Day, & Catano, 2000). In his early article, Thorndike refers to the "great progress" (p. 229) in the area of abstract intelligence as opposed to mechanical and social intelligence. In a prophetic manner, he recognized the difficulty of the "formal standardized conditions of the testing laboratory" (p. 231) to measure the social intelligence construct. This difficulty continues today with researchers debating the construct of EI; calling for a common language and definition of EI (Caruso, 2003).

In 1983, Howard Gardner completed work on his theory of multiple intelligences. Gardner's theory was made up of various intelligences including linguistic, musical, logical-mathematical, spatial, bodily-kinesthetic, and personal (1983). He posited that the traditional view of intelligence was limited and needed to be expanded to recognize a wider perspective of human intelligence and competence. In defining his ideas on the personal intelligence, Gardner recognizes two aspects of human nature: internal and external. In understanding the internal aspect of human nature, Gardner identifies that "the core capacity at work here is access to one's own feeling life" (p. 239). This includes the identification and understanding of personal feelings and the use of feelings to guide and direct actions. On the other end of the personal intelligence spectrum is outward interpersonal interaction. This includes the "ability to notice and make distinctions among other individuals and, in particular, among their moods, temperaments, motivations, and intentions" (Gardner, 1983, p. 239). Gardner's focus on the intrapersonal and interpersonal aspects of feelings along with interaction of feelings with behavior, thoughts, and motivations laid a further foundation for the birth of EI. By using the term intelligence, Gardner sought to "encompass many capacities that had been outside its scope" (1999, p. 34).

The formal introduction of EI by Salovey and Mayer in 1990 was the first specific exploration of the role that emotions played in the intrapersonal and interpersonal lives of humans as a cognitive ability. Since then, there have been many forays to define, explain, develop, and validate EI (Mayer, Salovery, & Caruso, 2004). While the subject is considered to still be in its infancy there has been much written and discussed on the topic with diverse findings and opinions. Scholarly researchers and popular media have

participated in the exploration (Gibbs, 1995; Goleman, 1995) resulting in controversy about what EI is, what it consists of, how it should be measured, and what if anything it predicts beyond traditional intelligence and personality (Davies, Stankov, & Roberts, 1998; Zeidner, Matthews, & Roberts, 2009).

The research and investigation of EI during the last two decades carries with it the debate as to whether EI should actually be considered "new" intelligence or a non-cognitive personality construct (Mayer, Salovey, & Caruso, 2008; Matthews, Roberts, & Zeidner, 2004; Mayer, Salovey, Caruso, & Sitarenios, 2001; Mayer, Caruso, & Salovey, 2000b; Davies, Stankov, & Roberts 1998; Schulte, Ree, & Carretta, 2004). The following sections will address the various perspectives of EI. In particular, these sections will explore EI as a non-unique construct, EI as a cognitive ability, and EI as a non-cognitive capability and unique aspect of personality.

EI as non-unique ability

There are some who question the uniqueness of EI (Schulte, Ree, & Carretta, 2004). It is appropriate to acknowledge the lack of acceptance of EI as a separate construct from personality and general cognitive ability (Davies, Stankov, & Robert, 1998). Long before the introduction of multiple intelligences (Gardner, 1983; Thorndike, 1920, Kihlstrom & Cantor, 2000), general cognitive ability was considered the key factor in understanding human ability and performance (Schulte, Ree, & Caretta, 2004). This being the case, EI has met strong questions as to whether it is different from personality constructs and a legitimate measure of intelligence (Davies, Stankov, & Roberts, 1998; McCrae, 2000).

In a study of 102 individuals from two small colleges in Texas, Schulte, Ree, and Carretta (2004) examined the relationship between cognitive ability, personality, and EI. Using the Wonderlic Personnel Test (WPT), which measures cognitive ability; the NEO-Five-Factor Inventory (NEO-FFI), which measures the five domains of adult personality; and the Mayer-Salovey-Caruso EI Test (MSCEIT), which measures an individual's ability to manage, understand, use, and perceive emotions the researchers sought to determine if EI could be predicted by cognitive ability and personality. Their findings showed a moderate relationship between WPT and MSCEIT as well as between various aspects of personality, a participant's sex, and EI. This led the researchers to speculate that the usefulness of EI may be limited in predicting human achievement beyond that of cognitive ability or personality (Schulte et al., 2004).

Moreover, in assessing the predictive validity of EI, Newsome, Day, and Catano (2000) explored the relationship between EI, personality, cognitive ability, and academic achievement in 180 Canadian college students. The researchers used the WPT to measure cognitive ability, the Sixteen Personality Factor Questionnaire (16PF) to assess the student's personality, and the EQ-i to assess EI. The results of the study showed significant correlations between GPA, the WPT scores, and the Extraversion and Self-Control factors on the 16PF. However, the correlations between GPA and the EI score were non-significant (Newsome et al., 2000). Newsome et al. reported that "the results provide no support for claims of EI's (as assessed by EQ-i) ability to predict academic achievement" (p. 1012) and that EI displayed little difference from personality traits.

Thus, some researchers question whether EI should be studied if it does not prove to be different from personality or intellect. If measures of EI do not provide evidence of

a "new" intelligence or a unique aspect of personality, then it does not further the understanding of human performance or relationships. However, there are researchers who defend the value of EI and believe that EI does account for variance not accounted for by personality.

EI as a cognitive ability

While some research questions the legitimacy of EI, there is also research that demonstrates its value. Mayer, Salovey, and Caruso (2000b) posited that EI can be defined as a traditional intelligence and cognitive ability. They characterized EI as the cognitive ability to process and use emotions to shape and influence other cognitive functions (Mayer et al., 2000b). It has been widely recognized that mental functioning consists of three parts: cognition, affect or emotions, and motivation (Hilgard, 1980). EI, by definition, should bring emotions and intelligence together. Mayer & Salovey (1997/2004) write that

> EI 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. (p. 35)

This definition clearly communicates the relationship between thoughts and emotions and the role that emotions play in enhancing one's cognitive abilities (Mayer, Salovey, Caruso, & Sitarenios, 2001). Table 1 provides a comparison of EI models.

Moreover, Mayer, Salovey, & Caruso (1999, 2000a) reported that EI meets the traditional standard for intelligence. They defended a position that as a mental-ability EI is a distinct form of a standard intelligence (Mayer, Salovey, Caruso, 2000b). There are

three stringent criteria to be met to be considered a true intelligence: conceptual,

correlational, and developmental. The conceptual criterion refers to EI as an ability rather

than preferred ways of behaving so that it can be measured by a mental performance test

(Carroll, 1993; Mayer et al., 1999). The second criterion, correlational, addresses the

need for EI to closely relate to other mental abilities, but still be distinct (Carroll, 1993).

The developmental criterion refers to the growth of abilities with age and experience.

Citing Fancher (1985), Mayer et al. (2000b) stated that "the absolute ability level rises

with age" (p. 400) and the development and increase of personal ability. In meeting these

three criteria, Mayer, Salovey, and Caruso, (2004) believe that EI fits into the perspective

of general intelligence (Carroll, 1993). Figure 1 shows Carroll's (1993) structure of

intelligence.
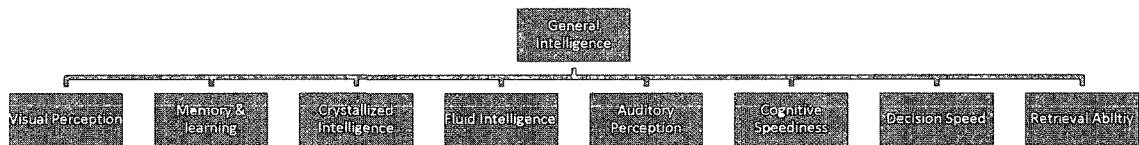
Figure 1 The structure of human intelligence (adapted from Carroll, 1993)

Operationalized as a cognitive ability, Mayer, Salovey, and Caruso (2004) have

identified four "branches" of EI (p. 199). The branches are arranged in a hierarchical

manner pertaining to the level to which the ability is connected with an individual's

overall cognitive and emotional functioning (Mayer, Salovey, Caruso, & Sitarenios,

2001). Mayer et al. (2004) described the four branches in the following manner. The

lowest branch is the perception and expression of emotions. Emotional perception is

measured through participants identifying the emotions in faces as well as identifying the

emotions in pictures of landscapes and designs. The second branch concerns the ability

for emotions to enhance and assist thinking. Branch two is measured by participants

comparing emotions to tactile or sensory stimuli. Branch three is the understanding and

analysis of emotions. The researchers measure the third branch by evaluating a

participant's ability to shift or change from one emotion to another and gauge the

intensity of emotion that a situation demands. Furthermore, participants are asked to

identify the blends of emotions in particularly complex situations. Branch four includes

the ability to manage emotions. In measuring branch four, Mayer et al. present scenarios

to the participant and ask how they would maintain or change their emotions. Branch four

measurements also include items concerning the management of other people's emotions

(Mayer et al., 2004).

Objective measures of EI

In defining EI as a standard intelligence, Mayer, Salovey, & Caruso (1999)

developed an objective, performance-based assessment that is similar to a traditional IQ

test (Emmerling & Goleman, 2003). The Mayer, Salovey, Caruso, EI Test v2.0 (MSCEIT

v2.0) and its predecessor, the Multifactor EI Scale (MEIS) were developed as objective

performance measures that meet the three broad traditional intelligence criteria as

mentioned above. The MSCEIT is based on the four branches of Mayer et al's definition

of EI and the measures of each branch. The 144-item assessment provides respondents

with an overall EI score and four branch scores. The MSCEIT has demonstrated to be a

solid instrument by showing strong evidence of both convergent and discriminate validity

(Sternberg, Lautrey, & Lubert, 2002; Mayer, Salovey, & Caruso, 2008) and reliability (Mayer, Salovey, Caruso, & Sitarenios, 2001).

To achieve an objective measure, Mayer, Salovey, and Caruso (2004) used both expert and consensus scoring. In expert scoring, the correct responses are determined by "scholars and researchers with specialties in emotion" (2004, p. 200). The consensus method uses the responses from all test-takers to determine the "optimal" answer. This method is somewhat questionable as the group consensus could be wrong (Mayer, Salovey, & Caruso, 2004). However, using both expert and consensus methods provide a stronger objective standard for the assessment.

Contrary to research conducted by Mayer, Salovey, Caruso, and Sitarenios (2001), Davies, Stankov, and Roberts state "that most objective measures of the Emotional Perception factor have extremely low reliabilities and do not satisfy accepted psychometric standards" (1998, p. 1012). This was also found to be true by Goldenberg, Matheson, and Mantler (2006). The researches posit that the consensual scoring is chiefly related to the low reliability. Roberts, Zeidner, and Matthews (2001) found similar problems in the early forms of objective measures, particularly in the sub-measures.

Another issue with MSCEIT is the long completion times and cost of the instrument (Goldenberg et al., 2006). The instrument consists of 144-items which require considerable time for individuals to complete. Also, the instrument is marketed by an international testing company and is expensive to administer. Both of these issues are problematic in carrying out research with the MSCEIT.

The perspective of EI as a part of human cognitive ability and intelligence provides a strong and logical tie between the cognitive and affective dimensions of

human ability. Viewed as a traditional intelligence, EI is described as the ability to use

emotions to inform and facilitate thoughts.

Table 1 Comparison of emotional intelligence models

Goleman, (1995) **Definition**: "The abilities, called here emotional intelligence, which include self-control, zeal and persistence, and the ability to motivate oneself" (p. xii).	Petrides, Pérez-González, & Furnham, (2007) **Definition**: "A constellation of emotion-related self-perceptions and dispositions located at the lower levels of personality hierarchies." (abstract)	Bar-On (2000) **Definition**: An array of interrelated emotional, personal, and social abilities that influences our overall ability to actively and effectively cope with daily demands and pressures. (p. 385)	Mayer & Salovey, (1997/2004) **Definition**: Emotional intelligence is the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional meanings, and to reflectively regulate emotions so as to promote both better emotion and thought.
Skill areas Self-awareness Self-regulation Social Awareness Relational-Awareness	**Related facets** Rumination Life satisfaction Depression Dysfunctional attitudes Coping skills	**Areas of skills** Intrapersonal -self-regard -assertiveness Interpersonal -empathy -social responsibility Stress Management -tolerance -impulse control Adaptability -flexibility -problem solving General Mood -happiness -optimism	**Four branch of EI** • Emotional perception and expression • Using emotions to aid thoughts • Emotional understanding • Emotional regulation
Type: Mixed model	**Type**: Trait model	**Type**: Mixed Model	**Type**: Ability model

EI as non-cognitive capability & disposition

In contrast to the view of EI as a distinct form of intellect is the view of EI as a non-cognitive ability outside of traditional intelligence. Within this perspective lies an argument that EI is a distinct aspect of personality. In this section, the mixed-method of EI and trait EI were also explored.

The concept of EI as a personality trait outside of traditional human cognition has been set forth as a recent addition to EI research. Petrides, Pérez-González, and Furnham (2007) stated that "the construct of trait EI refers to a constellation of emotion-related self-perceptions and dispositions located at the lower levels of personality hierarchies" (p. 26). This is in contrast to Mayer, Salovey, and Caruso's belief that EI was part of standard intelligence within the traditional cognitive taxonomy (Carroll, 1993).

Petrides, Pérez-González, and Furnham, (2007) posited that measures of trait EI will strongly correlate with higher order dimensions of personality. Furthermore, their research indicated that trait EI exhibited the potential for predictive validity beyond personality. The results of their research showed that EI had a strong negative relationship with depression, while controlling for an individual's positive and negative affect.

DeRaad (2005) showed that EI lacked a full relationship to the Big Five personality model. The Big Five model is a descriptive representation of the five major personality domains and the correlated skills and traits. The Big Five model includes the following factors: extraversion, agreeableness, conscientiousness, emotional stability (or Neuroticism), and intellectual autonomy (or Openness). The research evaluated the fit of six measures of EI in comparison to the Abridged Big Five Circumplex (AB5C). In

particular, DeRaad found that EI covered little of the Big Five and that trait EI could be considered a "striped Big Five" (2005, p. 685). This research demonstrated that EI is unique from the five major personality dimensions but has relationship to personality. Along these same lines, using a short self-report measure of trait EI, Saklofske, Austin, and Minski (2003) found significant correlations between EI and other measures, such as life satisfaction, happiness, loneliness, and depression even when personality was controlled. DeRaad (2005) and Petrides, Pérez-González, and Furnham (2007) identify EI as related to personality but yet still unique, however, there is debate to how unique EI is in compared to personality

A second concept of EI as non-cognitive capability & disposition is identified as a mixed method approach and lands in the middle of the trait EI and ability EI models. The mixed method defines EI as both a non-cognitive ability and dispositional traits "that are not fully accounted for by cognitive intelligence and traditional measures of personality" (Emmerling & Goleman, 2003, p. 11).

In 1995, Goleman's bestselling book, *Emotional Intelligence*, introduced the topic of EI as a competency approach to mainstream culture. Goleman's theory presents a framework of four skill areas: self-awareness, self-management, social awareness, and relationship management (2001). The four skill areas or domains represent competencies which individuals can learn and develop capabilities to allow them to be more effective in relationships. Goleman's theory grew out of a work performance context and was specially designed to "predict the ease by which a given individual will be able to master the specific skills and abilities of a given emotional competence" (Emmerling & Goleman, 2003, p. 17) and was created for organizational settings.

If Mayer and Salovey (1993) are recognized as introducing the term EI, then Goleman (1995) is credited with popularizing EI. The growing fascination with the term stemmed from statements that Goleman made concerning the importance of EI in determining one's success. In *EI*, Goleman (1995) stated that "EI is equal to if not more valuable than IQ as an indicator of one's professional and life success" (p. 34). Describing EI in this way created much attention with the construct being on the cover of Time magazine in 1995. In his third book, *The Emotionally Intelligent Workplace,* Goleman (2001) expounded on the benefits of a high EI. He stated that "EI more than any other asset is the most important overall success factors in careers" and "EI accounts for 85% to 90% of the success of organizational leaders" (p. xv). These grand statements have been met with critical responses as researchers seek empirical evidence to back the claims (Davies, Stankov, & Roberts, 1998; Matthews, Roberts, & Zeidenr, 2004; Zeidner, Matthews, & Roberts, 2009).

A third concept of EI found in the literature is developed by Bar-On. He defines the model "as an array of interrelated emotional, personal, and social abilities that influences our overall ability to actively and effectively cope with daily demands and pressures (Bar-On, 2000, p. 385). The model includes the ability to be aware of, understand, and express emotions; to be aware of, understand, and relate to others; the ability to control strong emotional impulses; and the ability to be flexible in adapting to change and solve problems of a personal nature (Emmerling & Goleman, 2003).

Self-report measures of EI

Bar-On developed the Emotional Quotient Inventory (EQ-i), a self-report instrument which has provided insight into emotional and social intelligence. The test was created as a "measure of emotionally and socially competent behavior that provides an estimate of one's emotional and social intelligence" (Bar-On, 2000, p. 364). Bar-On's concept of EI deals with traits that "influence our overall ability to effectively cope with environmental demands, as such it can be viewed as a model of psychological well-being and adaptation" (Emmerling & Goleman, 2003, p. 13). It is not a measure of personality traits or cognitive ability, but the instrument is one that is widely used to measure EI. The EQ-i provides a total EQ score and five sub-scores: intrapersonal, interpersonal, stress management, adaptability, and general mood.

Much like the objective, performance measures used to assess the cognitive ability models, self-report assessments have advantages and disadvantages. The major fault that some researchers have with the self-report measure is the overlap and lack of divergent validity with general personality measures (Davies, Stankov, & Roberts, 1998; Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006; Matthews, Roberts, & Zeidner, 2004). This overlap causes some to wonder if EI is truly distinct from personality. However, as mentioned above, researchers have showed that self-report EI does account for variance beyond personality (Saklosfkse, Austin, & Minski, 2003).

In a study of the reliability and validity of Bar-On's EQ-i, Dawda and Hart (2000) found that the instrument scales tapped a broad range of emotional constructs. In particular, the "EQ-i scales had a meaningful pattern of convergent validities with respect to measures of normal personality, depression, somatic symptomology, intensity of affective experience and alexithymia" (Dawda & Hart, 2000, p. 797). Therefore, Dawda

and Hart called for further research to determine the relationship that EI might have with other constructs and the need for clear operational definitions and empirical research to determine both convergent and divergent validities. However, some researchers question if self-report measures, like the EQ-i, are simply measures of personality (Brackett & Mayer, 2003; Davies, Stankov, & Roberts, 1998; Roberts, Zeidner, & Matthews, 2001).

There are other concerns regarding self-report measures as well. First, there is an issue of accuracy due to the responses based on self-perception which may or may not be skewed (Goldenberg, Matheson, & Mantler, 2006). A self-report measure requires an individual to possess a certain level of self-knowledge and understanding of their own abilities in order to accurately evaluate them. However, research shows that there are only small correlations between self-reported abilities and actual abilities (Davies, Stankov, & Roberts, 1998). Second, there is the issue of social desirability. This is when individuals attempt to convey themselves in a positive light in order not to be considered socially undesirable (Goldenberg et al., 2006; Mayer, Salovey, & Caruso, 2000a; Schutte, Malouff, Hall, Haggerty, Cooper et al., 1998).

The construct of EI does provide valuable understanding into the emotional and social functioning of humans. A person's ability to be aware of his/her own emotions and be able to express them appropriately along with the skills of being aware of and understanding others' emotions and managing interpersonal interactions is highly valuable. The next section will provide a general overview of college student mental health. It will provide a context for further discussion of the research literature concerning the relationship between EI and depression. The second section will examine depression and mental health issues of college students.

College Student Mental Health

Entering college, students face a new environment that is outside of the support network that surrounded them in high school (Pledge, Lapan, Hepner, Kivlighan, & Roehlke, 1998). Family separation, identity formation, and interpersonal relationships are key developmental issues that confront college students and can lead to struggles and/or moments of crisis (Kadison & DiGeronimo, 2004; Grayson, 2006). It is common for college students to struggle with interpersonal relationships, questions of identity and purpose, and potential vocational choices (Chickering & Reisser, 1994). These are normative adjustment issues that every college student faces on some level.

Currently, evidence shows that increasing numbers of college students are experiencing mental health problems (Gallagher, 2009; ACHA, 2010). Moreover, these mental health problems tend to be increasing in severity (Benton, Robertson, Tseng, Newton, and Benton, 2003; Sagun, 2006; Howard, Schiraldi, Pineda, & Campanella, 2006; Twenge, Gentile, DeWall, Ma, Lacefield, & Schurtz, 2010). The increase in the number of students dealing with psychological problems and the increase in the severity of the problems also have significant implications for higher education (Kadison, 2006; Kitzrow, 2003; Bishop, 2006). Some significant implications that arise for students with psychological difficulties concern academic interactions (Ducey, 2006). In particular, how do professors and academic leaders recognize and support students with mental health disorders? What level of training is necessary to prepare faculty and staff members? Moreover, there are additional institutional implications related to legal issues (Dickerson, 2006; May, 2006), counseling personnel (Kadison, 2006), and financial resources (Kitzrow, 2003). There are high expectations for the support and care of

students on the part of parents (Kadison & DiGeronimo, 2004). Furthermore, there are specific issues that arise with individual students. For example, medication (V. Schwartz, 2006), treatment options (Moses, 2006; Owen, Tao, & Radolfa, 2006; Thompson, 2007), and interpersonal relationships (Levine & Cureton, 1998; Kadison & DiGeronimo, 2004) must be managed with each student. This growth in mental health issues is creating new challenges for university faculty, administrators, and licensed mental health professionals (Benton et al., 2004; Kadison & DiGeronimo, 2004).

Diversity of students and needs

There are a number of recent studies that communicate the current situation of college and university campuses in regards to mental health. Today, campuses across the country are more diverse in terms of age, gender, and ethnicity along with increasing numbers of foreign-born and first-generation students (Choy, 2002; Benton, 2006). This diverse student population has brought richness to the learning on college campuses. However, the expanding demographic also includes a widening set of issues relating to the personal needs of these students. An increase in student diversity results in an increasing diversity of mental health issues. Kitzrow (2003) reported that "the need to provide counseling for such a broad range of students and issues-including multicultural and gender issues, career and developmental needs, life transitions, stress, violence, and serious psychological problems" (p.168) has stretched university counseling centers. In a survey of 939 college students at a large Midwestern public university, the top five self-reported psychiatric diagnoses were "depression-14.9%, eating disorders-6.1%, anxiety-5.9%, attention deficit/hyperactivity disorder-4.2%, and PTSD-3.4%" (Soet & Sovig,

2006, p. 417). It is important to recognize that the percentage of college students with

mental health issues is similar to non-student peers (Jaschik, 2008). The growth in mental

health disorders in people who are 18 – 24 years old is not isolated to college students.

However, due to the advancement of psychotherapeutic and pharmacological treatments

more students with psychological disorders are entering college (Sharkin, 2006;

Gallagher, 1994; Gallagher, 2009).

Disorder increase

College and university counseling directors have reported an increase in clients in

recent years. Robert Gallagher, of the University of Pittsburgh, conducts an annual

survey of counseling center directors. The survey included 302 institutions representing

2,600,000 students. In 2009, "10.4 % of enrolled students sought counseling in the past

year" (Gallagher, 2009, p. 4). That translates into 270,000 students seeking counseling

services at the schools in the survey. The Gallagher survey is based on the perceptions of

counseling center directors and staff. As a note of caution, these perceptions are not

always objective or scientifically accurate (Sharkin, 2006). The perceptions of counseling

staff and their recollection of treatments can be misleading when not backed by a valid

assessment instrument (A. Schwartz, 2006).

There have been studies based on student usage of counseling services. Kitzrow

(2003) reported on three institutions - Columbia University, MIT, and SUNY-Purchase -

as experiencing between a 40-50% increase in counseling services between 1995 and

2003. Furthermore, the 2006 National College Health Assessment showed in the prior 12

months, 60.4% of students surveyed had a "feeling things were hopeless" and 42.2% were "feeling so depressed it was difficult to function" (ACHA, 2007, p. 13).

Looking to other empirical studies gives a fuller picture of the increase in serious mental health issues. Benton, Robertson, Tseng, Newton, and Benton (2003) in their 13-year study showed significant increases in stress/anxiety, depression, personality disorders and medication use. This research was based on a licensed mental health professional's assessment of clients at the close of treatment. The licensed mental health professional completed the Case Descriptor List (CDL) to document the problems the client addressed during therapy. Over the 13-year period there was an increase in some of the mental health issues. In the 2006 data from the National College Health Assessment, between 2000 and 2006, there has been a 7.5% increase in students taking medication for depression, a 17.5% increase in students in therapy for depression, and a 43% increase in students who report being diagnosed with depression (ACHA, 2007, ACHA, 2001). In their review of college students, Levine and Cureton (1998) speak of students arriving at college after already struggling with difficulties of life and emotional fatigue. They report an increase in eating disorders (58%), classroom disruptions (44%), drug abuse (42%), alcohol abuse (35%), and suicide attempts (23%).

In a study of the mental health of college students, Sagun (2006) randomly evaluated the Personality Assessment Inventory (PAI) that students filled out as part of their intake process at a large Midwestern university. The study compared 225 subjects from the 1997-1998 academic year and 225 subjects from the 2004-2005 academic year. The research showed a significant difference in four scales measured by the PAI. The depression scale, the depression-physiological subscale, the anxiety scale, and the

anxiety-physiological subscale were all significantly increased from the first cohort to the second. This study also showed that students in the second cohort (2004-2005) who self-reported current psychotrophic medication usage demonstrated significantly higher mean scores in each scale. Also the number of subjects who self-report current psychotropic medication was significantly higher in the second cohort. Gallagher (2009), Kiztrow (2003), Benton et al. (2003), and Sagun (2006) all report similar research on the increase of depression on the college campus.

Severity increase

In addition to the increase numbers of students experiencing mental health concerns and disorders, the complexities of the issues they experience are also more serious. Prior to 1990, university licensed mental health professionals spent a majority of their time working with students on relational issues or "benign developmental and informational needs" (Kitzrow, 2003, p. 168). Now, these licensed mental health professionals report that they are frequently addressing significant psychopathology. In the latest survey data, it is reported at 10.4% of enrolled students utilized counseling center services (Gallagher, 2009). Gallagher reported that "93% of [counseling center] directors believe the number of students with severe psychological problems has increased in recent years and that 48.8% of clients have "severe psychological problems" (Gallagher, 2009, p. 6). The percentage of clients referred for psychiatric evaluation has increased from 12% in 2004 to 16.4% in 2006, a 36.6% increase (Gallagher 2006). The empirical research by Klerman and Weissman (1989) and Twenge, Gentile, DeWall, Ma, Lacefield, and Schurtz (2010) help to provide additional support beyond the research of

Benton, Robertson, Tseng, Newton, and Benton (2003) which used a licensed mental health professional's assessment concerning regular sessions with college student clients to support their argument for increase psychological problems.

Again, Benton et al. (2004) found that the proportion of clients with significant mental health issues increased over the time of the study. The percentage of clients increased in 14 of 19 problem areas that were studied. Moreover, the number of clients with multiple issues increased toward the end of the study. Likewise, Pledge, Lapan, Hepner, Kivlighan, and Roehlke, (1998) found that there has been an increase in the level of severity of mental health issues that counseling center staff are experiencing. Pledge et al. (1998) reported that "the more serious types of problems presented in university counseling centers have increased to a ceiling that may have now stabilized at a higher level of severity than in the prior decades (i.e., early 1980s and before)" (p. 387). In other words, the issues are not continually escalating, but they are more intense than in previous decades.

Driving forces

The next section will discuss some of the reasons for the increases in mental health concerns and disorders. What are the driving forces in this trend of increasing quantity and severity of mental disorders on college campuses (Benton et al., 2004; Pledge et al.,1998; Twenge et al., 2010)? Many psychological disorders first manifest during the college years: 18 to 24 years of age. Depression often appears during late adolescence or early adulthood (Kitzrow, 2003; Voelker, 2003). In conjunction with these developments, the recent advances in medications that treat these disorders make it

possible for students to function within the higher education setting. The survey of counseling center directors documents the increase of students taking medications over the past eight years (Gallagher, 2006). Moreover, students are coming to college having taken medications to manage mental disorders during primary and secondary school. Soet and Sevig (2006) found that 6.8% of students were currently taking medication and that 7.4% had taken medication in the past before attending school. There have been improvements in psychopharmacology, which has benefited people with psychological difficulties because treatment is safe, inexpensive, and requires less time (V. Schwartz, 2006). Schwartz also refers to the "shift to a more biological, medical model of psychological illness" as creating a desire to utilize medication as opposed to psychotherapy (2006, p. 60). Furthermore, there is "great sense of optimism" (V. Schwartz, 2006, p. 60) in the medication to treat psychological difficulties and the pharmaceutical industry is helping create and support the shift toward medication.

A second driving force is the increase of adolescent trauma and abuse. Levine and Cureton (1998) point to growing violence; family difficulties; and financial, emotional, and sexual problems as leading to greater mental health issues. More students are entering college having regularly seen a counselor for some sort of family or personal issue (Soet & Sevig, 2006). Levine and Cureton believe students are coming to college with increased levels of mental health difficulties.

Twenge, Gentile, DeWall, Ma, Lacefield, and Schurtz (2010) argue that another driving factor for the increase in psychopathology in American students is a result of the consumer culture and individualistic perspective that dominates society. Students have

greater expectations to achieve greater levels of education and financial wealth but are often disappointed with the extrinsic nature of their goals (Twenge et al., 2010).

Finally, the increase in mental health issues and demand for counseling services is in response to the societal pressures and problems in the American culture (Kadison, 2006). There are both external and internal expectations that students must face. There is an internal perfectionist mentality and desire to be the best in everything they attempt as well as external familial pressure. This can lead to increased anxiety or depression with perceived failure (Kadison & DiGeronimo, 2004).

Age of disorder onset, medication advances, increase in psychopathology, and societal issues are driving factors in the increase in numbers and severity of depression on college campuses. The current literature on college student mental health provides an appropriate need for concern. Along with common adjustment issues, college students are experiencing mental health issues at increasing rates and severity. The next section will look specifically at the issue of depression and how it impacts college students.

<div align="center">Depression and College Students</div>

In a study of the global burden of disease, the World Health Organization rates depression as the fourth leading cause and affects about 121 million people worldwide (World Health Organization, 2010). This ranking places depression as a leader in the loss of productivity for individual sufferers, their family and society in general. There is no denying the serious nature of depression's global scale. However, the first difficulty with depression is a concise definition. Grayson and Cooper (2006) stated that

According to the Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV-TR) (American Psychiatric Association, 2000), there are four kinds of depressive disorders – with *major depressive disorders* distinguished for severity and *dystyhmic disorder* for chronicity- and nine bipolar disorders, all involving manic or hypomanic episodes, usually in addition to depressive episodes. (p. 113)

Some describe the process of depression diagnoses as "trying to take their pictures but they refuse to stand still" (Grayson & Cooper, 2006, p. 113). The complexity of depression and its identification is a hurdle to overcome. Grayson and Copper (2006) also acknowledge the interpretation of a person's symptoms by the licensed mental health profession as another issue. What one professional labels dysthymia, another may identify as generalized anxiety disorder. This is in part due to the wide range in presentation of depressive symptoms. Depression looks very different in each person, and people do not usually fit into tightly defined categories of the DSM-IV-TR. The overlap between depression and other symptoms and diagnoses is large. This research will focus on unipolar depression.

In defining unipolar depression, it is necessary to make some distinction among the various types. Major depressive disorder (MDD) includes a combination of symptoms (listed below) that prevent an individual from functioning in normal life (Kadison & DiGeronimo, 2004). MDD is identified when an individual experiences a depressed mood or other symptoms for a minimum of two weeks (Osfield & Junco, 2006).

Dysthymia is similar to MDD but is less severe and includes chronic depressive symptoms that keep a person from being fully functional or enjoying life. Kadison and

DiGeronimo (2004) describe people with dysthymia as "enveloped in a cloud of negativity and there is a complete loss of perspective. Small problems become magnified, and worrying never ends" (p. 98). Depression and dysthymia are different in severity, chronicity, and persistence.

The APA (2000) provides important background and demographics for depression and Dysthymia. Depression is twice as common in adolescent and adult females as in males of any age. Furthermore, prevalence rates vary from 10% to 25% for females and 5% to 12% for males with no relation to ethnicity, education, income, or marital status (APA, 2000). The average age of on-set is in the mid-20s, and there is an increasing likelihood of reoccurrence with each episode (APA, 2000). Dysthymia is two to three times more likely in adult females than males with a lifetime prevalence of 6% for adults (APA, 2000).

According to the DSM-IV-TR, depression is identified as either depressed mood or the loss of interest or pleasure in nearly all activities for a period of at least two weeks. Moreover, to be considered depressed, an individual must also experience at least four additional symptoms drawn from a list that includes changes in appetite or weight, sleep, and psychomotor activity; decreased energy; feelings of worthlessness or guilt; difficulty thinking, concentrating, or making decisions; or recurrent thought of death or suicidal ideation, plans, or attempts (APA, 2000). Depression involves either clinically significant distress or some interference in social, occupational, or other important areas of functioning (APA, 2000). Sharkin (2006) adds other visible signs such as neglect in appearance and hygiene and weight loss. Furthermore, depression cannot always be noticed from outward appearance or behavior. It may only be recognized through

conversation and interaction as a person expresses feelings of sadness, hopelessness, unhappiness, or other emotions (Sharkin, 2006).

Depression trends and prevalence

Depression and its symptoms are complex and wide-ranging and research shows that the rates of depression are increasing, especially for younger generations. Two studies have identified an increasing prevalence of depression in younger cohorts when compared to older cohorts. Klerman and Weissman (1989) reviewed multiple epidemiological studies with large data sets from various cultures and found that depression rates were increasing. In most of the studies that Klerman and Weissman reviewed, there was an increase in the lifetime depression rates of cohorts born after 1940 and a decrease in depression prevalence in older cohorts. They also found that the rates of depression increased with each successive birth cohort in the 20th century and that there was an earlier onset of depression for each cohort (Klerman & Weissman, 1989).

A more recent study showed similar results for American-born cohorts. Twenge, Gentile, DeWall, Ma, Lacefield, & Schurtz, (2010) reviewed the responses of college and high school students on the MMPI and MMPI-a. Using a population of 63,706 college students and 13,870 high school students, the researchers found generational increases in depression and other psychopathology. Their research showed that the current generation scored about one standard deviation higher on the clinical scales than the college and high school students in 1938. Focusing specifically on depression, Twenge et al. (2010) found that when compared with students in the 1930s and 1940s, current students score three quarters of a standard deviation higher, and that 70% of students now score above

the average when using the 1930s and 1940s college students means as a benchmark. It was also revealed that the number of students who had mean depression scores of two standard deviations or more above the average had increased by 6 to 8 times (Twenge et al.).

The increase in depression severity is also highlighted by other researchers. In a clinical study, Benton, Robertson, Tseng, Newton, and Benton (2003) found that percentages of clients with depression increased in three consecutive cohorts. Specifically, they found significant increases in depression from a 1988-1992 sample of 4,104 clients to a 1992-1996 cohort of 4,019 clients to a 1996-2001 sample of 5,134 clients. The percentage of clients with depression increased from one cohort to the next. The research of Klerman and Weissman (1989), Twenge et al. (2010) indicates that current college students are experiencing significantly higher levels of depression than past generations and that there are a greater number of students with serious levels of depression.

Bayram and Bilgel (2008) reviewed the prevalence and socio-demographic correlations of depression in Turkish university students. Of interest to the researchers was the comparison of the Turkish students with other international college students in regards to depression as it correlates with age, gender, major, social-economic conditions, and residency. The 1,617 students in the sample took the Depression, Anxiety and Stress Scale (DASS-42). The mean score of the sample was in the mild category of depression with 8.1% of the sample in the severe or extremely severe category (Bayram & Bilgel, 2008). These scores were higher than other published normative data (Crawford & Henry, 2003; Lovibond & Lovibond, 1995b; Taouk, Lovibond, & Laube, 2001; Wong, et

al., 2006). The study also showed that males and females did not have significantly different depression scores (Bayram & Bilgel, 2008). However, according to the DSM-IV-TR depression "is twice as common in adolescent and adult females as in adolescent and adult males (APA, 2000, p. 372). Theorizing about the increased prevalence of depression, Bayram and Bilgel argued that "newly faced social and intellectual challenges may cause emotional pressure which may lead to an increased risk of depression, anxiety, and stress" (2008, p. 671). The proposed link between depression and emotional pressure provides an impetus to continue studying the relationship between EI and depression.

Another study that explored the prevalence and treatment of depression in college students showed that there were significant depressive symptoms displayed in many of the sample (Michael, Huelsman, Gerard, Gilligan, & Gstafson, 2006). Recognizing the difficulty that those students with depressive symptoms may face in college, the researchers sought to explore the prevalence and treatment-seeking practices of college students. In a study of 182 college students, 43% indicated that they had experienced depressive symptoms in their lifetimes along with higher mean scores for depression than norms for non-patient adult samples (Michael et al., 2006). Even though the prevalence of depression symptoms was high, only a small number of respondents had ever been treated for depression. Similarly, those who met the clinical depression level also reported limited participation in treatment (Michael et al.). Michael et al. found that those students with clinical depression levels who were seeking treatment were being treated solely with medication as opposed to a combination of medicine and psychotherapy. Furthermore, the study found that a greater number of males than females exhibited the

clinical levels of depression. This finding is in contrast to the DSM-IV-TR which indicates that depression is twice as common for females (APA, 2000).

In a similar study, Eisenberg, Gollust, Golberstein, and Hefner (2007) explored the prevalence and correlation of depression, anxiety, and suicidality in a sample of 2,843 university students. The research found that the prevalence rate for depression in the sample was 13.8% for undergraduate and 11.3% for graduate students. Two significant findings in the survey were that almost 20% of undergraduate students had missed academic activities the previous month due to mental health issues and that over 40% of undergraduates reported that mental or emotional difficulties negatively impacted their academic performance in the previous month (Eisenberg, et al., 2007). The research also noted that the factors of race, reported sexual orientation, and financial struggles were all positively correlated to depression (Eisenberg et al.). Finally, Eisenberg et al. found that males and females were about equal in screening positive to depression but that females were more likely to screen positive for major depression.

These studies demonstrate the serious concern with depression on college campuses both in terms of the increase in prevalence and the increase in severity. Moreover, Bayram and Bilgel (2008), Michael et al. (2006), and Eisenberg et al. address the important treatment concerns as well as the impact on the emotional and academic aspects of a student struggling with depression. The APA (2000) identified depression as a concern due to its high mortality rate in that "up to 15% of individuals with severe Major Depressive Disorder die by suicide" (p. 371). The number of students, age 15-24, who committed suicide in 2005 was 4,212. While depression is what most commonly impacts students (Ducey, 2006), it is important to understand the larger, complex nature

of mental health concerns of college students. The next section will present the research literature that brings the construct of EI and the issue of depression together.

<center>EI and Depression</center>

Labeling students who have depressive symptoms as being emotionally unintelligent is inaccurate (Zeidner, Matthews, & Roberts, 2009). However, depressed individuals will often experience drastic changes in personal functioning which may include wide variation in emotions (Akiskal, 2005). Furthermore, the poor management of emotions can bring about difficult and/or awkward social encounters (Ambady & Gray, 2002; Surguladze, Young, Senior, Brébion, Travis, et al., 2004). For example, an individual who is unable to manage their emotions may respond inappropriately to a comment that they misunderstood or was taken in the wrong way. However, there has yet to be conclusive research on any causal relationship between depression or and low EI. Zeidner, Matthews, and Roberts (2009) stated that

> [s]ome of the behaviors characteristic of mental illness can readily be described as "emotionally unintelligent," but labeling outcomes in this way is not informative about the sources of mental disorder. The more interesting issue is whether low EI acts as a diathesis or predisposition toward developing clinical disorders. (p. 308)

A first step is to gain a greater understanding of the relationship between EI and depression. The growing field of EI may provide beneficial insight into understanding mental disorders and offer possible strategies of support. The following section will review the literature on the relationship between EI and depression as well as related factors.

Depression symptomology and personality has been one topic of considerable research. Harkness, Bagby, Joffe, and Levett (2002) compared patients' depression levels and their personality by having 54 outpatients complete the NEO Personality Inventory (NEO-PI) and the Hamilton Rating Scale for Depression (HRSD). The goal of the research was to compare patients with major depression and chronic minor depression with patients with only major depression. The research found that a patient's recovery from a major depressive episode was accompanied with significant decreases in the Neuroticism scale and increases on the Extraversion scale on the NEO-PI (Harkness et al., 2002). The level of depression impacted an individual's affective state and their ability to exhibit warmth, assertiveness, and positive emotions. In this study of personality, outpatients who recovered from a depressive episode scored higher than those who experience chronic minor depression.

Rude and McCarthy (2003) studied depressed, formerly-depressed, and non-depressed college students concerning their emotional functioning. In particular, the research focused on depressed college students and their ability to regulate their emotions by having students complete three instruments that measured mood and emotions. An initial finding of the research showed that depressed students were less adaptive in regulating their emotions than non-depressed students (Rude & McCarthy, 2003). Emotional regulation is an important aspect of overall EI. Specifically, this research provides information on two vital aspects of EI: the ability to recognize emotions and to understand emotions. Depressed and formerly depressed students scored significantly lower than non-depressed student on their understanding and recognition of emotions (Rude & McCarthy, 2003). Furthermore, Rude and McCarthy concluded that depressed

students with problematic emotional regulation are associated with depression and may even be identified with a greater vulnerability to depression (2003). In summary, Rude and McCarthy (2003) and Harkness, Bagby, Joffe, and Levett (2002) demonstrate that depression impacts the emotional abilities of an individual.

EI involves both an internal and external dimension (Goleman, 1995). These dimensions are related as individuals perceive information from external situations and then process the information internally. Edwards and Weary (1993) studied how depression and the formation of impressions of social situation relate to each other. Their research explored the difference between depressed and non-depressed people in how they processed and formulated impressions. The results showed that depressed people were characterized by needing to exert greater effort in information processing than nondepressed people (Edwards & Weary, 1993).

Ambady and Gray (2002) explored the effects that an individual's mood had on the accuracy of social judgments. Undergraduate students were recruited to fill out the Beck Depression Inventory (BDI) and the Profile of Nonverbal Sensitivity (PONS). The PONS test gives visual and audio stimuli to measure an individual's accuracy to interpret nonverbal cues. Ambady and Gray found that higher scores on the BDI were significantly correlated to a lower ability of identifying nonverbal cues. Taken together, Edward and Weary (1993) and Ambady and Gray (2002) give evidence that depressed individuals had greater difficult in processing social information and identifying or understanding social cues. These factors play into EI dimensions of self-awareness and social relationships.

In related research, Surguladze, Young, Senior, Brédion, Travis, et al. (2004) explored the accuracy of recognition and bias in response to facial expressions in patients

with major depression. It was hypothesized that major depression would negatively impact the ability to recognize happy and sad facial expressions and that depression would impact the response bias to the facial expressions. Surguladze et al. found "impaired recognition accuracy and a conservative response bias particularly to happy emotional facial expressions in depressed patients" (2004, p. 216). The researchers argue that a depressed individual's difficulty in social situations may be a result of their deficit in recognition accuracy and response bias of appraising situations as negative. Compared to a non-depressed individual, a depressed individual will likely perceive a social situation in a negative light and be inaccurate in recognizing the emotions displayed by other people. Like Ambady and Gray (2002) and Edward and Weary (1993), Surguladze et al. (2004) demonstrate that depressed individuals have difficulty in social situations due to deficits in their understanding of interactions which involve emotions.

In a study of mood regulation and depression in high school students, Williams, Fernández-Berrocal, Extremera, Ramos-Díaz, and Joiner (2004) explored the difference between endogenous and hopelessness depression. Endogenous depression is characterized by melancholic features and a lack of interest in pleasant stimuli where as hopelessness depression tends to be the result of a negative life event or the environment (Williams et al., 2004). Citing Thompson (1994, p. 27), Williams defined mood regulation "as all the extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions." Mood regulation can be measured by an individual's "ability to identify, understand, express, and respond effectively to the full range of human emotions" (Rudd, Joiner, & Rajab, 2001, p. 37), as cited in Williams et al. (2004). Using the TMMS and the BDI in two samples the researchers found that

hopelessness depression and mood regulation had a greater negative correlation. Thus the mood regulation ability of individuals with hopelessness depression will tend to be weaker and less likely to adaptively identify, understand or respond to their emotions. This study is helpful in recognizing the increased difficulty that depressed individuals have in dealing with their emotions.

Interaction of Depression and EI

Hertel, Schutz, and Lammers (2009) explored the deficit of emotional abilities in individuals with depression, borderline personality disorder, and substance abuse disorder. One part of the research examined the emotional regulation, emotional perception, and emotional sensitivity and understanding of 31 patients with major depressive disorder. The authors predicted that the depressed patients would score lower than a non-depressed control group. Using the German version of the MSCEIT, the findings showed that the patients with major depression disorder did score lower than the control. The scores were significantly lower in overall EI and in the subcategories of using emotions to facilitate thought and understanding emotional information (Hertel, Schutz, & Lammers, 2009). The difference was not significant between the MDD clinical group and the control group in the perception of emotions or the regulation of emotions. The researchers identified clear associations between depressive disorders and emotional abilities in a clinical sample.

In another study of the relationship between EI and depression in a clinical sample, Downey, Johnston, Hansen, Schembri, Stough et al. (2008), argued that EI may have predictive value in determining early identification of those at risk of depression.

Using the self-report Swinburne University EI Test (SUEIT) to measure EI and the Beck Depression Inventory- 2nd Edition (BDI-II) to measure depression, the researchers found significant correlations between three specific dimensions of the SUEIT and BDI scores. Emotional recognition and expression, emotional management, and emotional control sub-scores were all significantly lower for clinical participants when compared with non-clinical (Downey et al., 2008). Regression analysis was performed using the SUEIT dimension scores as independent variables and BDI scores as the dependent variable and found that the emotional control and emotional management scores accounted for 43% of the variance in the depression scores. Downey et al., (2008) posited "that the lack of emotional control and the inability to regulate emotions are important factors associated with depression...that data presented here may offer tentative evidence for the possibility of using EI scores as a predictor of the incidence of depressive illness" (p. 97). While the findings of Downey et al. (2008) differ from Hertel, Schutz, and Lammers (2009) it is still clear that depressed individuals have lower ability to perceive, express, and control emotions.

Similar to Downey et al. (2008), in a sample of Spanish adolescents, Fernandez-Berrocal, Alcaide, Extremera, and Pizarro (2006) used the TMMS and the BDI to measure EI and depression. The researchers specifically argued that two of the three dimensions of the TMMS would predict differences in depression and anxiety. The clarity and repair dimensions of the TMMS were hypothesized to impact the mental health of the students. Clarity concerns the ability to distinguish emotions from each other and the repair scale measures an individual's ability to regulate emotions. Fernandez–Berrocal et al. (2006) found that the clarity and repair sub-scales of EI, as

measured by the TMMS, were negatively related at a significant level: "Specifically, adolescents reporting higher ability to discriminate clearly among feelings and to regulate emotional states showed less anxiety and depression, independent of the effects of self-esteem and thought suppression" (p. 23). In this correlational study, the direction of the causation between depression and EI cannot be determined, however there is a significant relationship when measure with the TMMS and BDI.

In a study of how EI moderates the relationship between stress and mental health, Ciarrochi, Deane, and Anderson (2002) investigated whether a person's ability to manage emotions protected them from adverse effects of stress. The research did not find any significant relationship between a negative life event and EI in predicting depression but found a significant relationship between life hassles and depression. They also found that "emotionally perceptive people appear to be more strongly impacted by stress than their less perceptive counterparts expressing higher levels of depression, hopelessness, and suicidal ideation" (Ciarrochi et al., 2002, p. 205). However, an individual with higher emotional regulation is less likely to be depressed. The perception and regulation dimensions can work opposite of each other to aid the individual in navigating a difficult situation.

The key skills and competencies that assist individuals in dealing with emotions or emotional situations have been explored. Ciarrochi and Scott (2006) and Ciarrochi et al. (2003) identified problem orientation, rumination, and identification and expression of emotions as important factors in an individual's mental health. These factors are tied to the EI of individuals as they involve the intra- and interpersonal interaction of emotions. Both studies found poor problem orientation, rumination, and emotion expression

difficulty to correlate with depression. The researchers posited that addressing an individual's abilities in these areas could support and minimize depressive symptomology (Ciarrochi & Scott, 2006; Ciarrochi et al., 2003).

Martinez-Pons (1998) conducted a study of EI and personal functioning. The study investigated 108 adults using path analysis to determine the relationship between EI, goal orientation, life satisfaction, and depressive symptomology in an effort to test the predictive power of EI. Depression symptomology was defined as "the cognitive, affective, and somatic manifestations of dejection or despondency" (Martinez-Pons, 1998, p. 4). The research showed that the higher an individual's EI score the more likely they were to demonstrate adaptive social behavior and less likely to experience an occurrence of depression (Martinez-Pons, 1998). The negative relationship between EI and depression demonstrated a predictive power of EI. Martinez-Pons (1998) contributes to the literature base concerning EI and depression by showing the relationship between the two constructs and advancing the research on the predictive nature of EI in psychological functioning.

Twenge, Gential, DeWall, Ma, Lacefield et al. (2010) conducted a study of current college students showing that the current generation has greater rates of depression and argues that it is due to the increase in the consumer culture and individualism in the United States. The pursuit of extrinsic motivations of college students and young adults has raised the bar of expectations so high that mental health suffers as a result. When students value money, looks, and status as supreme they tend to experience greater levels of depression (Twenge et al., 2010).

Chapter Summary

The purpose of this study was to examine the relationship between ERQ and depression as measured by the Student Relationships Assessment (SRA). The literature presented above gives a clear picture of the current state of the mental health of college students, with a particular focus on the increasing levels and prevalence of depression.

College students are facing increased difficulties in their transitions into adulthood (Levine &Cureton, 1998; Kadison & DeGeronimo, 2004; Kitzrow, 2003). Traditional adjustment issues, financial and economic concerns, societal pressures, and family issues are all creating increased pressure on 18-24 year olds. Of greater concern is the increase in mental health issues that are developing. Students face greater rates of serious psychological issues such as mood disorders, personality disorders and suicides (Benton, Benton, Newton, B., Benton, & Robertson, 2004; Pledge, Lapan, Heppner, Kivlighan, & Roehlke, 1998). Furthermore, the level of severity in mental disorders is also increasing (Benton, 2006).

These increases in mental health disorders in college students create challenges for institutions of higher education (Kitzrow, 2003; Kadison, 2006). As students on campus face mental health issues, institutional administrators, faculty, and staff are pressed to discover means to identify, care for, and support students with mental health disorders in achieving their academic goals. To address their mental health needs, students have utilized medication and professional therapy. These provide opportunities for the students with severe mental health disorders to attend post-secondary institutions with increasing success. However, there is also need for additional policies, programs, and personnel to support these students.

Furthermore, the construct of EI was reviewed. Three main theories and models of EI were highlighted (Goleman, 1995; Mayer, Salovey, Caruso, 1999; Bar-On, 2000). The role that EI plays in the social and emotional functioning of an individual is positive and far reaching. Furthermore, the literature demonstrates that individuals with greater abilities in the dimensions of EI are less likely to experience depression. The greater a person's ability to identify, understand, and express his/her own emotions the less likely he/she will be depressed. Moreover, the more skill an individual has in identifying, understanding, and managing other's emotions the less likely he/she is to experience depression.

CHAPTER III

METHODS

Introduction

The college experience is one of transition, adjustment, and development

(Kadison & DiGeronimo, 2006; Chickering & Reiser, 1994; Astin, 1993). Traditional

aged college students face many changes and transitional moments during their college

years. Most notably, these students deal with identity formation, relationship

development, and the movement from dependence to interdependence (Chickering &

Reiser, 1994; Grayson, 2006). All students face these issues in varying degrees.

However, some students are also confronted with psychological difficulties during their

college experience. Academic work, social interactions, and personal development are

often negatively impacted when college students face mental health difficulties. The

purpose for conducting this study was to investigate the relationship between emotional

intelligence and depression in college students.

Recent literature recognizes an increasing number of students who not only face

the normal adjustment issues but also encounter serious psychological difficulties

(Benton, Robertson, Tseng, Newton, & Benton, 2003; Pledge, Lapan, Heppner,

Kivlighan, & Roehlke, 1998; Mowbray, Megivern, Mandiberg, Strauss, Stein et al.,

2006). College counseling center directors increasingly believe that more students are

facing severe psychological disorders and that the disorders are becoming more complex

and difficult to manage (Gallagher, 2009, Barr, Rando, Krylowicz, & Winfield, 2010).

With more students enrolling in post secondary education and with improvements in

psychopharmacology, there are more students on the college campus who are living with

serious mental health disorders. While the greater accessibility is a positive trend, there are pitfalls to be aware of and issues to address. Furthermore, this increase has impacted the college campus on many levels both in and out of the classroom. The counseling center on the college campus cannot be the only office to reach out to students with serious psychological difficulties. The entire institution, faculty and staff, must be knowledgeable of how to identify, encourage, and support these students (Kitzrow, 2003; Kadison, 2006).

The purpose of this study was to investigate the relationship between depression and emotional relational intelligence (ERQ). ERQ is the skill, ability, and competency that an individual possesses to interpret emotions. An emotionally intelligent person is aware of and manages their emotions and the emotions of others. If a student who struggles with depression improves their ERQ, it is believed that they would be more likely to identify and manage their emotions, to increase educational functioning, and reduce the risk of failure (Martinez-Pons, 1998; Ciarrochi, Scott, Deane & Heaven, 2003; Hertel, Schutz, & Lammers, 2009). Further understanding of depression and ERQ may benefit college students who struggle with serious depression and mental health issues. For example, if a student, who struggles with depression, is able to increase their ability to identify and manage their emotions they may increase their coping mechanisms to address their depression. In this chapter, the population and data collection will be identified and defined. Moreover, the research design and data analysis will be reviewed.

<div align="center">Population</div>

The population of this study is from private, faith-based institutions that have administered the Student Relationships Assessment (SRA) on their campus. Table 2 provides a list of the institutions that administered the assessment. The population for this study was made up of the students who completed the SRA in fall 2009 and fall 2010. The population size is 1778.

Table 2.

List of participating institutions

Institutions
John Brown University
Biola University
Northwestern College-MN
Ozark Christian College
Southeastern Bible College
College of Biblical Studies-Houston
Lincoln Christian University
Oklahoma Baptist University
Heritage College, Ontario, Canada

Due to the fact that the participants completing the SRA attended faith-based institutions, the results of the assessment can only be generalized to other students attending similar institutions. There are many reasons that students choose to attend faith-based institutions, one of which is the intentional focus on academics through a lens of

faith or a particular religious affiliation. However, this factor prevents the researcher from making any conclusions regarding all college students based on the data analysis.

Procedure for Collecting Data

This study utilized data collected from fall 2009 and fall 2010 by the Center for Relational Enrichment (CRE) through the Student Relationships Assessment (SRA). The SRA is a valid and reliable survey instrument that measures emotional, relational, and spiritual aspects of college students. It consists of items that measure self-awareness, self-management, relational awareness, relationship management, and lifestyle choices along with demographic questions (CRE, 2008). The instrument contains 88-items that measure emotional relational intelligence (ERQ). The mean score on the 88 questions, measured on a 5-point Likert scale, was used to measure emotional relational intelligence. The SRA is divided into 12 subscales that measure ERQ. To measure perception of emotions, the mean score of the emotional self-awareness subscale was used. This subscale is made up of seven questions measured on a 5-point Likert scale. To measure emotional management subscale the mean score of the emotional self-management subscale was used. This subscale consists of six questions measured on a 5-point Likert scale. To measure depression, five lifestyle practice demographic questions which measure depressive symptoms based on the DSM-IV-TR (APA, 2000) were used. These five questions were sum scored to form a depressive subscale. The depressive subscale is measured on a 9-point frequency scale.

Design

The research paradigm selected for this study was correlational research that allows investigation into the association between two or more variables (Ary, Jacobs, Razavieh, & Sorensen, 2006). The measure of the relationship is called the coefficient of correlation which is a "statistical summary of the degree and direction of relationship or association between two variables" (Glass & Hopkins, 1996, p. 103). In exploring the relationship between depression and emotional intelligence, correlational research provides the appropriate design as it indicates whether there is a positive or negative relationship between the two variables and the strength of the relationship. It is important to acknowledge that correlational research does not, however, provide evidence of causation but does give a foundation for making predictions for future events (Glass & Hopkins, 1996).

Data Analysis

A Pearson product-moment correlation coefficient test (Pearson r) was utilized to examine the relationship between ERQ and depression. The individual ERQ scores were determined by the responses to the 88 questions. The ERQ score and the sum scored responses to the five depressive scale questions were use to determine the overall correlation between ERQ and depression. There are two subscales of ERQ emotional perception and emotional management. An individual's mean score for these two subscales were used along with the mean depression sum score to determine the correlation between emotional perception and depression and emotional management and depression. The Pearson r was used to answer the following questions:

1. To what extent is there a relationship between emotional intelligence and depression in college students?

2. To what extent is there a relationship between depression and perception of emotions?

3. To what extent is there a relationship between depression and emotional management?

An independent *t*-test was utilized to examine the differences between males and females concerning ERQ and depression. *t* tests were used to compare the mean differences of a dependent variable between two groups (Heppner & Heppner, 2004). The independent *t*-test will allow the research to determine whether or not any difference is due to chance. The following two questions were analyzed with an independent *t*-test:

4. Is there a statistically significant difference between depression scores for males and females?

5. Is there a statistically significant difference between emotional intelligence scores for males and females?

To address the sixth research question concerning the state of college student mental health the researcher evaluated the overall mean of the five depression vulnerability questions of the population. Based on the 9-point frequency scaled used in the SRA, the researcher was able to identify the general mental health of the population.

6. What is the state of mental health in college students?

Chapter Summary

The purpose of this chapter was to outline the methods and procedures used in this study. The study utilized an existing data set containing the responses of college

students at private, faith-based institutions on the Student Relationships Assessment administered by the Center for Relationship Enrichment. The data for 88 items on the SRA and depressive scale items were requested from CRE to explore the relationship between depression and ERQ, and to examine the differences in depression and ERQ between males and females. Pearson's *r* (Pearson product-moment correlation coefficient) was used to answer the first three research questions examining the relationship between depression scores, total ERQ scores, perception and awareness of emotions, and emotional self management. A *t*-test for independent samples was used to measure the differences between depression and ERQ mean scores for males and females. An evaluation of the depression sum score of the respondents was used to determine the current state of college student mental health.

CHAPTER IV

RESULTS

Introduction

The following chapter reports the study findings concerning the relationship between depression and emotional relational intelligence (ERQ). The purpose for conducting this study was to investigate the relationship between emotional relational intelligence (ERQ) and unipolar depression in college students. The rationale for the study was to provide additional research to support students with depression in their college experience. The study used responses from the Student Relationships Assessment (SRA). ERQ is the skill, ability, and competency that an individual possesses to interpret emotions. An individual's emotional intelligence includes both intrapersonal and interpersonal aspects. An individual with higher ERQ is aware of and manages his/her own emotions and is aware of and manages others' emotions.

The first section of the chapter will be a summary of the study's purpose, significance, design, and method of data collection. The next section reviews the data collection results and demographic statistics. The third section describes the data analysis results. A summary will close the chapter.

Summary of Study

The college experience is filled with transition and change. All students face some level of normal transition issues. Academic difficulties, struggles in social relationships, self-care decisions, financial issues, loneliness, and general life changes are some of normal life adjustment issues that surface in college (Kadison & DiGeronimo, 2004; Levine & Cureton, 1998). However, in addition to the normal transition and adjustment

issues, some students also face psychological issues which impact their college experience. The psychological issue most faced by college students is depression.

For college students, mental health difficulties are on the rise. Specifically, the number of college students with depression is increasing and becoming more severe (Benton et al., 2003). The purpose for conducting this study was to investigate the relationship between emotional relational intelligence (ERQ) and unipolar depression in college students.

The significance of the study is based on the support that the research can provide students who struggle with depression. As the relationship between depression and ERQ is understood it may assist students in their own ability to identify and manage emotions. The findings of the study also have implications for university counseling centers and student affairs practitioners. In their work with students with depression understanding the relationship between ERQ and depression may provide insight on how to care for students.

After securing IRB approval at the University of Arkansas and John Brown University (Appendices A & B) the data was collected from the Center for Relationship Enrichment (CRE). The researcher requested data contained in the fall 2009 and fall 2010 administration of the Student Relationships Assessment (SRA). The SRA is an 88-item instrument that assesses individual emotional relational intelligence along with additional test bank questions measuring money management, eating habits, sexual experiences, mental health, and other areas.

The research paradigm selected for this study was correlational research that allows investigation into the association between two or more variables (Ary, Jacobs,

Razavieh, & Sorensen, 2006). The coefficient of correlation defines the direction and magnitude of the relationship.

A Pearson product-moment correlation coefficient test (Pearson r) was utilized to examine the relationships between ERQ and depression, the ERQ subscale of emotional self-awareness and depression, and the ERQ subscale of emotional self-management and depression. An independent t-test was utilized to examine the differences between males and females concerning ERQ and depression.

Data Results

In order to access the data the researcher contacted the Center for Relationship Enrichment to request the responses from the fall 2009 and fall 2010 administrations of the Student Relationships Assessment (SRA) and was granted approval (Appendix C). Nine institutions administered the SRA to new students in the fall 2009 and the fall 2010. The SRA is a survey instrument that measures emotional, relational, and spiritual aspects of college students (Center for Relationship Enrichment, 2010). The SRA ERQ scale Cronbach's alpha of internal consistency is .93 (Center for Relationship Enrichment, 2010). The 88-item assessment measures emotional relational intelligence (ERQ) using 12 subscales. The alpha level for the emotional self-management scales is .80 and for the emotional self-awareness scale the alpha is .81(Center for Relationship Enrichment, 2010). In addition to the 88-items, the instrument has a test bank of questions measuring eating habits, depression, sexual experiences, drug and alcohol use, money management as well as other areas. For this study, the researcher used five questions to measure depression vulnerability. The depression vulnerability scale's Cronbach's alpha of internal consistency was .84. Citing Nunnally (1978), O'Rourke, Hatcher, and Stepanski

(2005) state that Reliability coefficients above .70 are generally seen as adequate in social science.

The CRE sent the researcher data files for each year with the requested information. After combining the two files there were 1755 responses in the data set. Because two of the research questions included gender, the first step in cleaning the data was to remove all responses which did not specify gender. The second step of cleaning the data set was to address missing information. First, any respondent who had more than ten missing data points in succession or did not answer more than 85% of the survey was removed. After this step the data set contained 1729 usable responses (N=1729). A second data cleaning step was to address missing data in the usable responses. To fill in missing data for the usable population, the researcher replaced missing items with the group mean for those items (Heppner & Heppner, 2004). This strategy is acceptable because the group mean is expected to represent the central tendency of the variable.

All data analysis was performed by using SAS 9.0.

Data Analysis

Data analysis for the study utilized the population of the fall 2009 and fall 2010 SRA administrations and included 1729 college students (N=1729). The population consisted of 42% (n = 725) males and 58% (n = 1004) females. Eighty-six percent (n = 1480) of the population identified themselves as freshman; 7% (n = 119) as sophomore; 5% (n = 87) as juniors; 1% (n = 18) as senior; and less than 1% as fifth-year senior, graduate student, or other. Sixty-five percent (n = 1137) of the population identified themselves as being 17-18 years old, 25% (n = 440) as 19-20 years old, 4% (n = 77) as

21-22 years old, 2% (*n* = 28) as 23-25 years old, 3% (*n* = 44) as 26 or older, and less than

1% (*n* = 3) did not respond.

The distributions of ERQ and depression vulnerability scores were normal in that

the skewness and kurtosis were with generally accepted values (Heppner & Heppner,

2004). The skewness and kurtosis for the ERQ distribution was .05 and .48 respectively.

The skewness and kurtosis for the depression vulnerability distribution was 1.10 and 1.26

respectively.

The following table (Table 3) provides a summary of the demographic descriptive

statistics discussed above.

Table 3

Summary of Demographic Descriptive Statistic

Variable	n	Percentage
Gender		
Males	725	42%
Females	1004	58%
Age groups		
17-18	1137	65%
19-20	440	25%
21-22	77	4%
23-25	28	2%
26+	44	3%
No data	3	< 1%
Academic classification		
Freshman	1480	86%
Sophomore	119	7%
Junior	87	5%
Senior	18	1%
5th + year Senior	4	< 1%
Graduate School	7	< 1%
Other	14	< 1%

The population mean and standard deviation for the ERQ scores and depression scores are displayed in Table 4.

Table 4

Means and Standard Deviations of ERQ and Depression Vulnerability

Variable	*N*	*M*	*SD*
ERQ	1729	327.75	29.18
Depression	1729	14.79	6.68

The Pearson product-moment correlation coefficient test (Pearson *r*) was utilized to examine the relationship between ERQ and depression. The individual ERQ scores were determined by the summed responses to the 88 questions. The ERQ score and the sum scored responses to the five depressive scale questions were used to determine the overall correlation between ERQ and depression. There are also two subscales of ERQ: emotional perception and emotional management that were analyzed for correlation with depression. An individual's sum score for these two subscales was used along with the depression scale sum score to determine the correlation between emotional perception and depression and emotional management and depression. The Pearson *r* was used to answer the following questions:

1. To what extent is there a relationship between emotional intelligence and depression in college students?

2. To what extent is there a relationship between depression and perception of emotions?

3. To what extent is there a relationship between depression and emotional management?

Displayed in Table 5 are the correlation coefficients from this analysis.

Table 5

Correlation Coefficients for Variables in Research Question 1, 2, and 3

Variable	ERQ	Perception	Management	Depression
ERQ		.64*	.71*	-.47*
Perception			.42*	-.15*
Management				-.50*

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*p<.0001

Results of the analysis for research question one revealed that there was a statistically significant moderate negative linear relationship at a $p<.0001$ level between ERQ scores and depression vulnerabilities for the students who took the SRA in fall 2009 and fall 2010 $r(1729)=-.47$, $p <.0001$. For these data, the mean (sd) was 327.75 (29.18) for ERQ scores and 14.79 (6.68) for depression. The relationship between an individual's emotional relational intelligence and depression is that as emotional relational intelligence increases depression vulnerability decreases.

The Pearson's r results for research question two indicated that there was a statistically significant weak negative linear relationship at a $p<.0001$ level between emotional perception scores and depression vulnerabilities for the students who took the SRA in fall 2009 and fall 2010 $r(1729)=-.15$, $p <.0001$. The mean (sd) for the emotional

perception scores was 26.78 (3.53). The relationship between an individual's emotional perception and depression is that as emotional perception increases there was a decrease in depression vulnerability.

The Pearson's r results for research question three indicated that there was a statistically significant moderate negative linear relationship at a $p<.0001$ level between emotional management scores and depression vulnerabilities for the students who took the SRA in fall 2009 and fall 2010 $r(1729)=-.50$, $p <.0001$. The mean (sd) for the emotional management scores was 21.88 (3.01). The relationship between an individual's emotional management and depression is that as the emotional management increases their depression vulnerability decreases.

The independent t-test was utilized to examine the differences between males and females concerning ERQ and depression. The independent t-test allows the researcher to determine whether or not any difference is due to chance. The following two questions will be analyzed with an independent t-test:

4. Is there a statistically significant difference between depression scores for males and females?

5. Is there a statistically significant difference between emotional intelligence scores for males and females?

The independent t-test to determine the difference between male and female depression scores was statistically significant $t(1727) = -5.40$, $p <.0001$. The mean and standard deviation for depression scores are displayed in Table 6. The mean score show that males had a lower level of depression vulnerability than the females and that the

difference was statistically significant (for males, $M = 13.78$, $SD = 6.58$; for females, $M = 15.52$, $SD = 6.65$).

Table 6

Means and Standard Deviations of Male and Female Students' Level of Depression Vulnerability

Gender	N	M	SD
Males	725	13.78	6.58
Females	1004	15.52	6.65

Results from the independent t-test for research question five indicated that there was not a statistically significant difference between males' and females' level of emotional relational intelligence $t(1727) = 1.87$, $p < .06$. While this difference was not statistically significant, the p value of .06 is close to .05 to identify a moderate difference between the mean ERQ scores for males and females. The mean and standard deviation for ERQ scores are displayed in Table 7. The mean scores show that males had a higher level of ERQ than the females but that the difference was not statistically significant (for males, $M = 329.29$, $SD = 29.68$; for females, $M = 326.64$, $SD = 28.77$).

The final research question in this study concerned the state of college student mental health:

6. What is the state of mental health in college students?

The question was addressed by reviewing the depression scores on the SRA. The author reviewed the depression vulnerability scores. The overall depression vulnerability score mean (sd), table 6, of the fall 2009 and fall 2010 administrations of the SRA was 14.79 (6.68). Dividing the mean by the number other questions addressing the depression vulnerability scale is 2.96. Based on the Likert scale used for these questions on the SRA, a 2.96 would equate to students who took the SRA in fall 2009 and fall 2010 experiencing depression symptoms once per month.

Table 7

Means and Standard Deviations of Male and Female Students' Emotional Relational Intelligence Scores

Gender	N	M	SD
Males	725	329.29	29.68
Females	1004	326.64	28.77

Chapter Summary

This chapter summarized the study, described the data utilized for the study, provided the results of the analysis and answered the research questions. Explanation was given for how the data was obtained from the Center for Relationship Enrichment. Description of the population was given along with description of the statistical analysis used to test the research questions.

Research questions one, two, and three were correlational and determined the relationship between depression and ERQ, emotional management, and emotional

perception. The relationships were all statistically significant and in negative direction at a $p<.0001$ level. The relationship between overall ERQ scores and emotional management with depression were moderately strong in magnitude. The relationship between emotional perception and depression was weak in magnitude.

Research question four and five analyzed the difference between males and females on ERQ and depression vulnerability. Findings demonstrated that there was a significant difference between depression vulnerability for males and females. Females were significantly more likely to be vulnerable to depression. There was not a statistically significant difference between emotional relational intelligence in males and females. Males did have higher a higher level of emotional relational intelligence, but it was not statistically significant.

Research question six addressed the state of college student mental health. Within the scope of this research, the findings demonstrated that the population experienced depression symptoms once a month.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Introduction

The college experience is a highlight for many 18 – 24 year old students. The time

spent in the university setting is filled with moments that shape who a person is and will

be later in life. Developmental changes and transitions are numerous for college students

(Grayson, 2006; Chickering & Reisser, 1994; Astin, 1993). Issues of identity, purpose,

and autonomy confront students throughout the college years.

Moreover, there is evidence of increasing numbers of college students facing

mental health difficulties during their post-secondary education. Not only are students

working through normal developmental issues such as identity development and

vocational decisions but many are also balancing mental health difficulties as well

(Benton et al., 2003; Pledge et al., 1998; Twenge et al., 2010; Sagun, 2006). Specifically,

increasing numbers of students are experiencing depression and the level of depression is

more severe than in the past (Benton et al., 2003; Twenge et al., 2010).

Within the sphere of college student mental health, researchers have studied the

connection of emotional intelligence (EI) to depression. EI involves an individual's

ability to understand, interpret, and manage emotions (Oliver, 2009). As college students

continue to face depression an understanding of the relationship between EI and

depression may be valuable for students, student affairs professionals, licensed mental

health professionals, and university administrators in aiding the navigation through the

college years.

This chapter provides a summary of the study, offers discussion of the analysis results, puts forth recommendations for future research and practice, and closes with highlights and conclusions from the study.

<center>Summary of the Study</center>

The purpose of this study was to investigate the relationship between unipolar depression and emotional relational intelligence (ERQ) and the implications for higher education. ERQ is a measure of emotional intelligence from the Student Relationships Assessment (SRA). It is believed that a further understanding of unipolar depression and ERQ may provide vital support for college students who struggle with depression and mental health issues.

The significance of this study is found in the help it may provide college students, student affairs practitioners, licensed mental health professionals, and institutions to achieve students' educational goals and aspirations. ERQ is valuable in working with college students with psychological issues. Downey et al. (2008) stated that "EI intuitively offers a window into mental health, since the ability of individuals to understand their own emotional states or emotional problems is considered an important indicator of healthy mental functioning" (p. 94). University licensed mental health professionals benefit from greater insight into the relationship between depression and ERQ. Ciarrochi and Scott (2006) reported that "emotional competence measures may be of benefit to counselors, in that they can help the counselor to identify client strengths and weaknesses and can provide feedback on how the client is improving" (p. 231). There is also a benefit for student affairs practitioners in their work with college students.

Research on the relationship between depression and ERQ will provide possible programmatic strategies that will benefit student's holistic health.

This study utilized data collected from fall 2009 and fall 2010 administrations of the Student Relationships Assessment (SRA) by the Center for Relational Enrichment (CRE). The CRE sent the researcher data files with the requested information for the fall 2009 and the fall 2010 administrations of the SRA. The SRA is a valid and reliable survey instrument that measures emotional, relational, and spiritual aspects of college students using 88-items that measure emotional relational intelligence (ERQ). It consists of items that measure self-awareness, self-management, relational awareness, relationship management, and lifestyle choices along with demographic questions (CRE, 2008).

To analyze the SRA data the Pearson product-moment correlation coefficient test (Pearson r) and independent t test were utilized. Pearson r was used to examine the first three research questions:

1. To what extent is there a relationship between emotional intelligence and depression in college students?

2. To what extent is there a relationship between depression and perception of emotions?

3. To what extent is there a relationship between depression and emotional management?

Results of the analysis for research question one revealed that there was a statistically significant moderate negative linear relationship at a $p<.0001$ level between ERQ scores and depression vulnerabilities for the students who took the SRA in fall 2009

and fall 2010 $r(1729)= -.47, p <.0001$. As an individual's emotional relational

intelligence increases their depression vulnerability decreases.

The Pearson's r results for research question two indicated that there was a

statistically significant weak negative linear relationship at a $p<.0001$ level between

emotional perception scores and depression vulnerabilities for the students who took the

SRA in fall 2009 and fall 2010 $r(1729)= -.15, p<.0001$. As an individual's emotional

perception increases there was a decrease in their depression vulnerability.

The Pearson's r results for research question three indicated that there was a

statistically significant moderate negative linear relationship at a $p<.0001$ level between

emotional management scores and depression vulnerabilities for the students who took

the SRA in fall 2009 and fall 2010 $r(1729)=-.50, p<.0001$. As an individual's emotional

management increases their depression vulnerability decreases.

The independent t-test was utilized to examine the differences between males and

females concerning ERQ and depression. The following two questions were analyzed

with an independent t-test:

4. Is there a statistically significant difference between depression scores for
   males and females?

5. Is there a statistically significant difference between emotional intelligence
   scores for males and females?

The independent t-test to determine the difference between male and females

depression scores was statistically significant $t(1727) = -5.40, p<.0001$. Males had a

lower level of depression vulnerability than the females and that difference was

statistically significant (for males, $M = 13.78$, $SD = 6.58$; for females, $M = 15.52$, $SD = 6.65$).

Results from the independent t-test for research question five indicated that there was not a statistically significant difference between males' and females' level of emotional relational intelligence $t(1727) = 1.87$, $p<.06$. Males had a higher level of ERQ than the females but the difference was not statistically significant (for males, $M = 329.29$, $SD = 29.68$; for females, $M = 326.64$, $SD = 28.77$).

The final research question in this study concerned the state of college student mental health.

6. What is the current state of college student mental health?

Since the scope of this study was limited to unipolar depression the sixth research question was addressed through the depression scores on the SRA. The overall depression vulnerability score mean (sd), Table 8, of the fall 2009 and fall 2010 administrations of the SRA was 14.79 (6.68). Dividing the mean by the number of questions addressing the depression vulnerability scale is 2.96. Therefore, based on the SRA and the Likert scale used to measure these questions, on average, the students who took the SRA in fall 2009 and fall 2010 experienced depression symptoms about once per month.

Table 8

Means and Standard Deviation of Depression Vulnerability

Variable	N	M	SD
Depression	1729	14.79	6.68

Conclusions

1. The relationship between an individual's emotional relational intelligence and depression was negatively correlated. Described another way, as the ERQ score of an individual increased their depression score decreased. While the correlation between ERQ scores and depression were statistically significant it is also important to determine if there is practical significance to the correlation. The coefficient of determination for ERQ and depression was .22. This means that 22% of the variability in depression can be explained by ERQ. This variance is in close range to what other researchers found in studies of depression and emotional intelligence (Downey et al., 2008; Martinez-Pons, 1998).

2. The relationship between an individual perception of emotions and depression was negatively correlated. Stated in a different way, as an individual's ability to perceive emotions increases their depression decreases. Again, while the relationship between emotional perception and depression was found to be statistically significant, it was not determined to be practically significance. The coefficient of determination was .0225. This means that just over two percent of the variance in depression can be explained or determined by emotional perception. Because 98% of the variance in depression scores is attributed to some other factor emotional perception is not of practical significance.

3. The relationship between an individual's ability to manage emotions and depression was negatively correlated. Stated differently, as an individual's ability to manage emotions increases their depression decreases. The correlation between emotional

management and depression was determined to be statistically significant as well as practically significant. The coefficient of determination was .25. This means that 25% of the variance in depression was explained by emotional management. This finding is supported by other research which shows that emotional management and depression are negatively correlated (Ciarrochi, Deane, & Anderson, 2002; Fernandez-Berrocal et al., 2006).

4. There was a significant statistical difference between males and females in regards to depression. Males were less likely to be depressed or have depression vulnerability than females. The effect size is .26, which falls in the small to medium effect. The female depression vulnerability scores are about one quarter of a standard deviation lower than male depression vulnerability scores.

   This finding is similar to other research which shows that females are more likely to suffer with depression and depression symptoms than males (APA, 2000).

5. There was not a significant statistical difference between males and females in regards to ERQ. This finding is similar to other research on emotional intelligence and gender (Saklofske et al., 2003). Additionally, the effect size is .09. Thus the degree in which the ERQ mean for males differs from the ERQ mean for females is insignificant.

6. Students are experiencing symptoms of depression vulnerability on a monthly basis. The results of this study cannot be compared with other national surveys that assess college student health. However, as other assessments demonstrate, the SRA also highlights that students are regularly struggling with feelings of hopelessness,

feeling depressed, experiencing dissatisfaction with everything, feeling stressed, and experiencing loneliness.

Recommendations for Research

This study examined data and included the entire population from the fall 2009 and fall 2010 administrations of the Student Relationships Assessment. The researcher used the 88-items that measure emotional relational intelligence, five test bank questions that measure depression vulnerability, and gender to test the research questions. The SRA includes other demographic variables that could be used to conduct further research. Moreover, other statistical analysis could provide further insight into the relationship between ERQ and depression.

1. The first recommendation is to conduct further research on the difference in ERQ scores and depression scores. This study determined that there was a significant correlation between ERQ and depression. A next step would be to identify whether there is a significant difference between ERQ scores in various levels of depression vulnerability. For example, using the SRA a researcher could conduct an ANOVA analysis of depression scores. Mean depression scores could be broken into three levels: low (1-15), medium (16-30), and high (31-45). An ANOVA analysis would determine if there was significant difference between ERQ score and the three levels of depression. This would give greater insight into the interaction between ERQ and depression by determining if there was a difference in ERQ scores at low, medium, and high depression vulnerability.

2. A second area for further research could involve an exploration of the relationship between ERQ and academic classification. Is there any difference between ERQ scores of students in different academic classifications? There is research that shows that as students get older their emotional abilities increase (Mayer, Salovey, & Caruso, 2004). Conducting an analysis of variance (ANOVA) to determine if ERQ scores are different between freshmen, sophomores, juniors, and seniors would provide indication of whether ERQ increases with academic advancement.

3. In a similar pursuit, research could be conducted to explore the relationship between depression and academic classification. Is there any difference between depression vulnerability scores of students in different academic classifications? An analysis of variance (ANOVA) would allow a researcher to determine if there is a difference in depression vulnerability scores for freshman, sophomore, junior, or senior students. It would also be beneficial to conduct a 2 (gender: male vs. female) x 4 (academic classification: freshman vs. sophomore vs. junior vs. senior) analysis of variance to determine the effect and interaction of gender and academic classification on depression.

4. In following the correlational research, further study utilizing a regression analysis would be helpful to determine any predictive ability of ERQ. The current study does not imply any causation or prediction between ERQ and depression. A regression analysis with ERQ as the predictor variable could provide insight on the value of ERQ score as a predictor of depression vulnerability.

5. In light of the increasing mental health needs on college campuses further study of the relationship between ERQ and other mental disorders would be beneficial. The

study's focus on ERQ and unipolar depression is one area of college student mental health. An exploration of the relationship between ERQ and anxiety would be complimentary to this study and broaden the scope of students and their academic experience.

6. Another recommendation for future study would be to incorporate a second depression assessment with the SRA. For example, a researcher could administer the Beck Depression Inventory (BDI-II) along with SRA. The BDI-II is a long standing assessment with wide acceptance from scholars and licensed mental health professionals.

7. This study assumed that the SRA measured depression vulnerability. Further research could examine a person's general mood fluctuation instead of depression. It is possible that student may not be experiencing depression so much as variation in your daily mood. This is an important and helpful distinction to add greater clarity to the discussion on college student mental health.

8. This study examined the state of college student mental health in research question six. To analyze this research question, the depression vulnerability scale was used. The researcher used to self-report answers to depression related questions to comment on the mental health of college students. From a clinical standpoint there is a significant difference between the terms mental health and depression. Further research could use a wellness framework to address the mental health as a whole.

Recommendations for Practice

As a result of conducting this study on the relationship between ERQ and unipolar depression there are two recommendations for practice on college campuses. This study provides helpful insight for student affairs practitioners and counseling center staff in their work with and support of college students.

1. College officials would be served well to learn more about emotional relational intelligence. In its infancy, ERQ and emotional intelligence research has not gained wide acceptance as a part of the post-secondary education. Traditional content and knowledge acquisition remain the chief priority within the college curriculum. Recognition and development of both curricular and co-curricular initiatives to educate students on their emotional awareness and management would benefit not only students but society as a whole. Graduates entering the work world with understanding of vital cognitive knowledge and skills as well as a foundation of emotional awareness and management would be valuable for day to day work and interpersonal interaction.

   Moreover, this study focused on the relationship between ERQ and unipolar depression. Analysis showed a negative relationship between ERQ and depression vulnerabilities. It would be helpful to give attention to students with low ERQ scores with an aim to support them in successful completion of their education.

2. Programmatic efforts that focus on emotional relational intelligence for female students may be helpful. This study was consistent with other research regarding the greater likelihood of females to experience depression and depression vulnerability. Due to this finding it is recommended that female students be engaged in proactive educational initiatives that acknowledge the existence of these struggles as well as

treatment options or strategies. For example, student affairs professionals and counseling center staff could intentionally promote educational programs for female student which aid in the identification of emotions.

Discussion

The current study provides a contribution to the research on emotional intelligence and college student mental health with the additional correlation analysis using the SRA. The SRA proves to be a valuable instrument in evaluating emotional relational intelligence while at the same time allowing expanding research on college students.

The study supports other research which reports a relationship between depression and emotional intelligence (Downey et al., 2008; Martinez-Pons, 1998; Ciarrochi, Deane, & Anderson, 2002; Hertel, Schutz, & Lammers, 2009; Fernandez-Berrocal et al., 2006). As post-secondary institutions seek to aid students in their transition into college and successful completion of degree requirements, having a clearer picture of ERQ and depression vulnerabilities can offer some assistance. With this increased information, licensed mental health professions and student affairs practitioners can proactively serve student in avoiding pitfalls in navigating college.

Goleman (2001) stated that emotional intelligence accounted for about 80% of success in organizational leaders. Likewise, this study recognizes the relationship between ERQ and depression in college students but not at the levels that Goleman has stated.

There is also literature that denies the uniqueness of emotional intelligence (Brackett et al., 2006; O'Conner, 2003; Davies et al., 1998). This study puts forth

analysis based on the use of the Student Relationships Assessment to support the usefulness of ERQ in working with college students. Assessing a student's ability to perceive, understand, and manage emotions is possible and valuable. Furthermore, evaluating the relationship between a student's ERQ and lifestyle practices and actions gives important insight into the student as well as provide a basis from which to care and support the student in their college endeavors.

Emotional relational intelligence offers significant benefit for college students. It would worthwhile for institutions to infuse the curriculum and pedagogy with ERQ. ERQ would be especially valuable in a first-year-experience course and in senior capstone course. As student transition out of high school and their parent's home into the university setting teaching on emotional awareness and emotional management would be valuable. For example, as student move into a residence facility on campus they are experiencing a roommate relationship for the first time. ERQ can benefit students in navigating this relationship.

Another place in a student's academic tenure which would be well suited for instruction on emotional relational intelligence would be a senior capstone course. This is a last opportunity to prepare students for professional interactions. A student's awareness of their emotions and ability to manage their emotions will be helpful in job interviews, professional relationships, as well as being a positive contributing citizen.

Another area in which ERQ would be beneficial is in general student interactions. The explosion of social media interaction has brought about some unhealthy relationship trends. The use of social media and electronic communication has reduced communication to a rapid fire exchange of few words. There is a perception of closeness

because of the increased ease of information exchange; however the emotions within the conversation are often not translated through the medium except for the glibly used emoticon. An increase in ERQ skills and abilities could help make up for the loss in face-to-face interaction as students are better able to communicate about their emotions within the social media medium.

This study was conducted at private, faith-based schools that were members of the Council of Christian Colleges and Universities. The student who attends an institution of this type could possibly have a biased result on a survey of this nature. A student at a religious institution may answer the SRA in a significantly different manner than a student at a secular institution. There is a possible "halo" effect that impacts the results of survey like the SRA at a faith-based institution. No matter the institution type, all students experience mental health difficulties. However, students at faith-based institution could possibly have different responses due to social desirability, life style choices, or life experiences.

Chapter Summary

This chapter began with a brief introduction of the study. This included the purpose of the study, the significance of the study, methodology for the study, data analysis, and summary of the findings for the research questions. Several conclusions of the study that were based on the data analysis were given as well as future recommendations for research and practice. The study's contributions to the research on the relationship between emotional intelligence and depression were highlighted and consideration was given to the study's support and contradiction with past literature and research.

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Appendix A

Memorandum of Approval Received from the

University of Arkansas Institutional Review Board

UNIVERSITYof**ARKANSAS**

Research Support and Sponsored Programs
Institutional Review Board

September 30, 2010

MEMORANDUM

TO:	Andre Broquard Jennifer Miles
FROM:	Ro Windwalker IRB Coordinator
RE:	New Protocol Approval
IRB Protocol #:	10-09-111
Protocol Title:	*College Student Mental Health: The Relationship Between Depression and Emotional Intelligence Using the Student Relationship Assessment*
Review Type:	☒ EXEMPT ☐ EXPEDITED ☐ FULL IRB
Approved Project Period:	Start Date: 09/30/2010 Expiration Date: 09/29/2011

Your protocol has been approved by the IRB. Protocols are approved for a maximum period of one year. If you wish to continue the project past the approved project period (see above), you must submit a request, using the form *Continuing Review for IRB Approved Projects*, prior to the expiration date. This form is available from the IRB Coordinator or on the Compliance website (http://www.uark.edu/admin/rsspinfo/compliance/index.html). As a courtesy, you will be sent a reminder two months in advance of that date. However, failure to receive a reminder does not negate your obligation to make the request in sufficient time for review and approval. Federal regulations prohibit retroactive approval of continuation. Failure to receive approval to continue the project prior to the expiration date will result in Termination of the protocol approval. The IRB Coordinator can give you guidance on submission times.

If you wish to make *any* modifications in the approved protocol, you must seek approval *prior to* implementing those changes. All modifications should be requested in writing (email is acceptable) and must provide sufficient detail to assess the impact of the change.

If you have questions or need any assistance from the IRB, please contact me at 120 Ozark Hall, 5-2208, or irb@uark.edu.

Appendix B

Memorandum of Approval Received from the

John Brown University Institutional Review Board

🛡 JOHN BROWN UNIVERSITY

Institutional Review Board Approval

Proposal Identification Number: 001-2010

Primary Investigator: Andre Broquard

Title: COLLEGE STUDENT MENTAL HEALTH: THE RELATIONSHIP
BETWEEN DEPRESSION AND EMOTIONAL INTELLIGENCE USING THE
STUDENT RELATIONSHIPS ASSESSMENT

I am pleased to inform you that your research proposal has been approved by the JBU
Institutional Review Board. It is the Board's opinion that you provided adequate safeguards
for the welfare of the participants in this study.

You are authorized to implement this study as of the date of final approval, **9/21/2010**, and
this authorization is valid for one year, with the option to renew authorization if protocols
do not change.

This approval is granted with the understanding that the research will be conducted within
the published guidelines of the JBU Institutional Review Board. Any proposed changes
to the protocols should be reported to the IRB for approval.

Sincerely,

David E. Johnson, PhD Chair

Institutional Review Board Phone: 479-524-
7164 Fax: 479-238-8563

Appendix C
Letter from Center for Relationship Enrichment

CRE

The Center *for* Relationship Enrichment

Gary J. Oliver, Ph.D.
Executive Director

Greg Smalley, Psy.D.
Director of Church
Relationship Ministries

National
Board of Reference

Dave and Jan Dravecky
Outreach of Hope

Dr. Jack Hayford
The Church On The Way

Dr. Howard G. Hendricks
Dallas Theological Seminary

Dr. Diane Langberg
Langberg & Associates

Dr. Sherod Miller
Interpersonal
Communications Program

Beth Moore
Living Proof Ministries

Dr. David Olson
Life Innovations, Inc.

Drs. Les and Leslie Parrott
Seattle Pacific University

Dennis Rainey
FamilyLife

Gary Smalley
Smalley Relationship Center

Don Soderquist
Retired Vice Chairman/COO
Wal-Mart Stores, Inc.

Dr. Scott Stanley
University of Denver

Joe White
Kanakuk Kamps, Inc.

H. Norman Wright
Author, Conference Speaker

September 22, 2010

The Center for Relationship Enrichment approves of the study entitled:
College Student Mental Health: The Relationship Between Depression and
Emotional Intelligence using our Student Relationships Assessment (SRA) in
all capacities needed for this study. The data will not have any personally
identifiable information.

Sincerely

Jackson W. Dunn, M.S.
University Relationships Coordinator
The Center for Relationship Enrichment
John Brown University
2000 West University Street
Siloam Springs, AR 72761
479.524.7352
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Appendix D

SRA Consent Form

**THE CENTER FOR RELATIONSHIP
ENRICHMENT**

**STUDENT RELATIONSHIPS
ASSESSMENT (SRA)**

The SRA was designed by The Center for Relationship Enrichment
(CRE) at John Brown University to give students across the country the
opportunity to focus and reflect on some important areas of their
emotional, relational, and spiritual lives. It will also help the
administration, faculty and student development staff to discover ways
in which they can more effectively educate and equip the whole student.

The SRA is CONFIDENTIAL and ANONYMOUS and will be read by a
computer. While it would be helpful if you answer all of the questions,
please remember that if for any reason you are uncomfortable
responding to any question you can simply leave it blank.

Thank you!