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Emotional Intelligence in Professional Psychology Doctoral Students: A Cross Sectional Study

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FLORIDA STATE UNIVERSITY

COLLEGE OF EDUCATION

EMOTIONAL INTELLIGENCE IN PROFESSIONAL PSYCHOLOGY

DOCTORAL STUDENTS: A CROSS SECTIONAL STUDY

By

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ABSTRACT

Talent development and performance are two commonly investigated areas of psychological research, yet a minimal number of studies have been conducted that examine the specific factors that contribute to the development and performance of psychologists. The purpose of this study was to understand and describe elements of emotional intelligence and self-efficacy that was hypothesized to develop during doctoral psychology education and that ultimately contributes to performance in psychologists¹. The present study provided an opportunity for research data to be collected and analyzed that assisted in identifying emotional intelligence and self-efficacy in psychology doctoral students, and the role of these constructs in relation to master psychologists, who are considered the “best of the best” among psychologists (Skovholt & Jennings, 1999). A pilot study was conducted on master’s level mental health counseling and social work students to confirm the feasibility of the present dissertation study.

This study examined 87 clinical, counseling, and school psychology doctoral students from United States doctoral graduate programs, which comprise a subset of psychologists-in-training and psychology graduate programs. Two predictor variables (total years of graduate study and total hours of supervised clinical experience) and one criterion variable (performance-based emotional intelligence) were explored, with general self-efficacy and psychotherapy-specific self-efficacy serving as mediator variables. The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) was included to measure performance-based emotional intelligence. Additionally, the General Self-Efficacy Scale (GSE) and Counselor Activities Self-Efficacy Scale

¹ For the present study, *psychologists* are defined as clinical, counseling, school, or combined program (any combination of clinical, counseling, or school) psychology doctoral students, which are subsets of psychologists and professional psychology graduate programs.

(CASES) were used to measure the mediator variables. These measures were chosen due to their psychometric properties and use in the previous literature.

A multiple regression analysis and multiple mediation bootstrapping analysis were performed to test the first and second research questions, respectively. Findings revealed that supervised clinical experiences predicted higher performance-based emotional intelligence scores and that psychotherapy-specific self-efficacy and general self-efficacy were not mechanisms through which doctoral academic experiences affected performance-based emotional intelligence. Overall, total years of graduate study and total hours of supervised clinical experience accounted for 18.9% of the variance in performance-based emotional intelligence. Limitations of the current study, implications of the findings, and suggestions for future research are offered.

CHAPTER ONE

INTRODUCTION

Many individuals in present-day society maintain the desire to achieve peak levels of performance within their selected occupation. Nevertheless, our society routinely ponders how individuals become successful in their chosen profession. A moderate amount of psychological research has focused on examining the factors that contribute to the development and mastery of skills in a given domain. Previous studies have investigated emotional intelligence as a predictor of performance. Specifically, higher education degree programs in engineering, medicine, and nursing have examined the role of emotional intelligence in students and professionals, yet limited research has been conducted on emotional intelligence in the field of psychology.

Despite research efforts in other domains, few studies have been conducted that examine emotional intelligence, its relationship with self-efficacy, and these factors' association with performance in psychology. This area of research is valuable as it aims to extend the current research examining psychologist performance, which previously has not explored the role of emotional intelligence. Similarly, very few studies have examined emotional intelligence in clinical, counseling, and school psychology doctoral students. In this review, the literature that is associated with performance, emotional intelligence, and self-efficacy within the profession and practice of psychology is examined. This chapter presents information on the current study to readers by familiarizing individuals with the statement of the problem and the study's social significance. Likewise, the research questions and hypotheses are presented, along with the research analyses, key assumptions, limitations, and operational definitions of terms.

Statement of the Problem

A significant amount of research has been conducted to examine the developmental and psychosocial elements of talent development and performance, as well as to identify strategies to increase and prolong success. However, talent development, which is the enhancement of pathways to expertise and achievement in culturally cherished domains (Pfeiffer, 2012b), and success attainment, which is the accomplishment of goals (Subotnik, Olszewski-Kubilius, & Worrell, 2011), has only been minimally studied in association with the profession of psychology. Previous research on talent development and success has found predictors and ongoing behaviors that highly-skilled individuals in other domains (e.g., music, athletics, medicine, and chess, etc.) commonly employ (Burton, VanHeest, Rallis, & Reis 2008; Charness, Krampe, & Mayr, 1996; Durand-Bush & Salmela, 2002; Ericsson, Krampe, & Tesch-Romer, 1993; Grabner, Stern, & Neubaur, 2006; Henriksen, Stambulova, & Roessler, 2010; Leprohon & Patel, 1995; MacNamara, Button, & Collins, 2010; Morgan & Giacobbi, 2006; Starkes et al., 1993). Emotional intelligence, which represents a frequently investigated area of psychological research, is commonly identified as a predictor of performance. Earlier studies have examined the relationship between emotional intelligence and academia, workplace performance, and overall performance whereas very little research has examined the association between emotional intelligence and clinical, counseling, and school psychology doctoral students.

While limited research exists, the extant literature and common sense on emotional intelligence suggests that this construct is a significant factor in the efficacy of psychologists (Kaplowitz, Safran, & Muran, 2011) and psychotherapy. Regardless, prior to this study only two studies have been conducted on emotional intelligence and psychologists, which indicated the need for more research to be conducted in this area. Similarly, a review of the literature did not

yield any previous studies that have examined differences in emotional intelligence between students at different points in a professional clinical, counseling, or school psychology doctoral program.

In addition to emotional intelligence, self-efficacy represents another important variable that appears to have implications for development of competence in psychologists. In Kaplowitz, Safran, & Muran's (2011) study on 23 psychologist-client dyads utilizing the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Salovey, Caruso, & Mayer, 2002), the researchers found support for emotional intelligence as a predictor of therapists' positive ratings of therapy sessions ($r = .20$). It appears that the researchers measured a construct similar to self-efficacy, yet they did not specifically examine self-efficacy. The self-efficacy construct refers to psychologists' beliefs about their capacity to perform and may impact one's performance-based emotional intelligence. Likewise, increased academic experiences, such as number of supervised clinical experience hours and number of years of graduate study, may predict self-efficacy. Further, in the present study, it was hypothesized that self-efficacy may mediate the relationship between academic experiences and emotional intelligence. While more academic experiences are likely to predict higher emotional intelligence, self-efficacy is likely the mechanism through which academic experiences affect emotional intelligence, making it a suitable mediator variable. Moreover, mediators provide information on the method through which a variable affects an outcome (Baron & Kenny, 1986). In spite of this, self-efficacy has not been studied as a mediator of academic experiences and emotional intelligence in clinical, counseling, and school psychology doctoral students.

Furthermore, it was important to conduct research in this area in order to analyze factors that contribute to performance in the psychology profession, as well as to delineate how the

progression of emotional intelligence occurs for those who are immersed in the psychology field. This information may be useful for the educational and experiential portion of both masters and doctoral-level psychology training programs, as well as practitioners who are seeking to attain higher performance within the practice of psychology. This research study hopes to enhance insights concerning the differences in emotional intelligence and self-efficacy among clinical, counseling, and school psychology doctoral students with different total hours of supervised clinical experience and years of graduate study. It also provides possible methods for increasing emotional intelligence in psychology graduate students.

Social Significance

Research on talent development and performance is typically conducted with three goals in mind: to understand how talent development occurs, to identify fundamental determinants that can be utilized by others to ease the journey to success, and to help those deemed experts to prolong their levels of high performance (Starkes, Helsen, & Jack, 2001). This area of research is valuable as it intends to aid researchers, educators, and professionals in understanding how high performance occurs. From a general standpoint, high performance is recognized as the observation of productivity and competence. In psychology, high performance and success attainment can be viewed as one's status in the profession and amongst peers, financial standing, and client case outcomes. However, previous research on talent development and performance has commonly focused on other talent domains, such as athletics, music, chess, and medicine.

Emotional intelligence has been recognized as a predictor of workplace performance (Bharti & Sidana, 2012; Cherniss, Extein, Goleman, & Weissberg, 2006; Goleman, 1995; Mangat, 2012), which makes it a valuable construct to examine in terms of psychologist development and subsequent performance. This study sought to address whether doctoral

clinical, counseling, and school psychology graduate program curriculum and supervised clinical training experiences increase emotional intelligence. Secondly, the study explored whether perceived general self-efficacy and psychotherapy-specific self-efficacy mediate the relationship between clinical, counseling, and school psychology doctoral program academic experiences and emotional intelligence.

The present study provided an opportunity for research data to be collected and analyzed that assisted in defining differences in emotional intelligence and self-efficacy between students with different levels of experience in clinical, counseling, or school psychology doctoral programs. This data shed light on the training, maturation, and academic experiences that aided in the development of doctoral students' emotional intelligence. This information is equally valuable to those practitioners who currently conduct psychotherapy, supervisors, professors, and psychology students who are beginning their mental health career. Similarly, this information is beneficial for psychology masters and doctoral training programs, as well as American Psychological Association (APA) graduate program benchmark workgroups, as it sought to provide information that can benefit the development of course curriculum, program of study design, practicum experiences, and faculty supervision of students.

Key Assumptions

The following key assumptions are offered about the instruments and participants in the present study:

1. Perceiving emotions, facilitating emotions, understanding emotions, and managing emotions are all concepts that are related to the construct of emotional intelligence (Salovey & Mayer, 2002).

2. Participants responded to survey questions in a truthful and authentic manner, thereby providing valid data for the present study (Locke, 1996).
3. The assessment measures that were administered to participants in this study maintain evidence of validity and reliability.
4. The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, & Caruso, 2002) is an accurate performance measure of participants' emotional intelligence.
5. The Counselor Activities Self-Efficacy Scale (CASES; Lent, Hill, & Hoffman, 2003) accurately assessed psychotherapy-specific self-efficacy in participants.
6. The General Self-Efficacy Scale (GSE; Schwarzer & Jerusalem, 1995) correctly assessed participants' general self-efficacy.

Research Questions and Analyses

After consideration of the statement of the problem, social significance, and the aforementioned empirically based variables, the following research questions were investigated:

Q1: What is the strength of the relationship of academic experience, as measured by total years of graduate study and total hours of supervised clinical experiences, to psychology doctoral students' performance-based emotional intelligence?

Q2: Do general self-efficacy and psychotherapy-specific self-efficacy mediate the relationship between psychology doctoral students' academic experiences and performance-based emotional intelligence?

While further details are provided in chapter three concerning the research design, methods, assessment measures, and analysis procedures, a quasi-experimental, cross-sectional, causal-correlational design that included a sample of 87 professional psychology doctoral

students was used to address the above research questions. Multiple regression analyses were employed to assess the effect of each predictor variable on the criterion variable and multiple mediation bootstrapping analyses were used to measure the mediator models.

Limitations

The following are limitations that might be contained within this study:

1. The study relies on participant self-report.
2. Participation in this study was voluntary; therefore, not all eligible participants completed the survey.
3. The study's design is cross-sectional, which means data was collected at one point in time.

Operational Definitions of Terms

For clarification purposes and in order to avoid confusion concerning the connotations of several terms used in the current chapter, the following definitions are provided.

- *Ability*: A pre-disposition to develop proficiencies within a given domain; talents that are malleable and need to be cultivated (Subotnik, Olszewski-Kubilius, & Worrell, 2011).
- *Achievement*: "To accomplish something difficult rapidly and independently through mastering, manipulating or organizing physical objects, human beings, or ideas. To overcome obstacles and attain a high standard. To excel one's self. To rival and surpass others. To increase self-regard by the successful exercise of talent" (Murray, 1938).
- *Benchmarks*: "A set of core skills for professional psychology that students should develop during their training" (APA, 2013).
- *Career*: The "time extended working out of a purposeful life pattern through work undertaken by a person" (Reardon, Lenz, Sampson, & Peterson, 2009, p. 6).

- *Competence*: “The potential to use specific sets of abilities and skills; having the ability to do so something well; skills can be learned and contribute to an individual's ultimate success and quality of life” (Herling, 2000; Jacobs, 1997; Scarr, 1989).
- *Deliberate practice*: “Focused activities designed to improve performance” (Ericsson & Lehmann, 1996, p. 276).
- *Domain*: A specific, culturally-valued talent field (Pfeiffer, 2012a).
- *Elite performance*: “Displaying tremendous talent” (Feist, 2006, p. 31).
- *Emotional intelligence*: One’s aptitude to monitor and express one’s own feelings, as well as recognize and differentiate others’ emotions in a way that can guide productive thinking and actions (Carr, 2009; Mayer & Salovey, 1997).
- *Emotional perception*: the ability for one to recognize emotion in others’ facial and body expressions (Mayer & Salovey, 1997).
- *Emotional integration*: the ability for the individual to use emotions to facilitate thoughts (Mayer & Salovey, 1997).
- *Emotional understanding*: the capacity to recognize emotions and utilize such information (Mayer & Salovey, 1997).
- *Emotional management*: the capability for individuals to regulate emotions within the self and in others (Mayer & Salovey, 1997).
- *Empathy*: The ability to accurately understand and constructively respond to the expressed feelings, thoughts, behaviors, and needs of others (Nelson & Low, 1999).
- *Success attainment*: More advanced than competence; high-level mastery of a skill or talent (Subotnik, Olszewski-Kubilius, & Worrell, 2011).

- *Gifted*: A term used to identify individuals who maintain high ability in one or more specific domains (Lohman & Foley Nicpon, in press; Lohman, 2009; Pfeiffer, 2002; Worrell & Erwin, 2011).
- *Master psychologists*: Individuals who are considered the “best of the best” among psychologists (Skovholt & Jennings, 1999).
- *Novice*: A person who is new to a given domain; “typical individual” (Brenninkmeyer & Spillane, 2008, p. 437).
- *Performance*: Execution of a task (Subotnik, Olszewski-Kubilius, & Worrell, 2011).
- *Psychologist*: “Psychologists have a doctoral degree in professional psychology (clinical, counseling, or school) from an organized, sequential program in a regionally accredited university or professional school” (APA, 2013).
- *Psychologist trainee*: An individual who is enrolled in a training program, such as an accredited university or professional school, in preparation to become a psychologist; “a professionally formative period” (Kuyken, Peters, Power, & Lavender, 2003).
- *Psychology*: The analysis of cognitions and behavior (APA, 2013).
- *Psychology doctoral program*: Doctoral level “training programs in professional psychology in the areas of (a) clinical, (b) counseling, (c) school, (d) other developed practice areas, and (e) combinations of two or three of the above areas” (APA, 2013).
- *Psychotherapy*: “Any of a group of therapies, used to treat psychological disorders, that focus on changing faulty behaviors, thoughts, perceptions, and emotions that may be associated with specific disorders” (APA, 2013).
- *Self-efficacy*: A person’s belief in his or her own capacity and aptitude to engage in goal-oriented behaviors (Bandura, 1977).

- *Skill*: A goal-directed behavior that can be learned or a pre-disposition to do something well, either manually, mentally, or both (William & Darity, 2008).
- *Success*: Accomplishment of a goal (Subotnik, Olszewski-Kubilius, & Worrell, 2011).
- *Superior performance*: “Excellent performance” (Grabner, Stern, & Neubauer, 2006).
- *Talent*: Specific ability in a given domain (Burton, VanHeest, Rallis, & Reis, 2008).
- *Talent Development*: “Optimizing developmental pathways to success attainment and accomplishment in culturally valued domains” (Pfeiffer, 2012b).
- *Theory*: “An organized set of concepts that explains a phenomenon or set of phenomena” (APA, 2013).

Summary

This chapter has provided a brief overview of emotional intelligence as it relates to the psychology field. The statement of the problem and social significance of the current study were presented and the research questions, key assumptions, study’s limitations, and operational definitions were also offered. In chapter two, a review of the professional literature is provided. Chapter three then reviews the specific research methodology that was performed for this study. In particular, the sample and recruitment procedure is described, as well as the instrumentation, research questions, hypotheses, design, and procedures for analyzing the collected data. Chapter four provides the results of this study and chapter five offers a discussion on the findings, limitations, delimitations, implications, and suggestions for future research.

CHAPTER TWO

REVIEW OF THE LITERATURE

While the previous section reviewed the statement of the problem and social significance of the current study, this section presents a review and critical analysis of the literature.

Definitions, as well as factors that are related to emotional intelligence and self-efficacy are examined. Additionally, a review of the literature specific to emotional intelligence and self-efficacy within the psychology field is presented. Finally, content and methodological gaps in the literature, as well as research questions are addressed.

Theoretical Foundation of Talent Development and Performance

In recent years, the scientific study of talent development and performance, which is the execution of a task (Subotnik, Olszewski-Kubilius, & Worrell, 2011), has yielded significant attention. Mieg (2009) stated that most studies and theories on superior performance development typically consist of comparing experts to novices in a matching domain and by making comparisons of experts to those individuals who are classified as part of the general population. As prominent areas of research, talent development and performance have been approached from varying perspectives: these constructs have been assessed from a psychometric standpoint and have been analyzed within the fields of cognitive and social sciences (Heller, 2007). Additionally, superior performance has often been credited to genetics, exceptional intelligence, or deemed as a heavenly talent (Ericsson & Charness, 1994; Glaser, 1992). In response to the varying theories on performance, scholars have originated models to assist in identifying and explaining talent development. In this section, two general models and five psychology-specific models of talent development and performance are reviewed.

Bloom (1985) developed a theory of talent development that speaks to the contribution of

teachers. In the first stage of the theory, the teacher playfully engages the student in a topic or domain that produces interest and quick progress and that is reinforced by both the teacher and parents. The second stage occurs if the child is deeply interested in the topic or domain; in this instance, they will express such interests to their parents who will then seek to provide them with teachers or coaches who can deliver instruction in the talent area. If the child continues to develop a deeper interest in the domain, a teacher or coach will guide them towards developing that particular domain further, which constitutes the third stage of the theory. Bloom further elaborated on this theory by noting that elite performance cannot be fully developed in a school setting, but that outside coaching, training, and practice must take place. Additionally, Bloom suggested that a person is typically unable to reach success attainment alone, but that both family and teachers are essential elements of actualization within talent development.

Subotnik, Olszewski-Kubilius, and Worrell (2011) broadly identified several common factors that are generally understood and upheld by researchers within the field of giftedness, talent development, and performance:

- Individuals naturally encompass abilities that are malleable, and therefore that must be cultivated to develop talent and potentially reach levels of eminence.
- Individual talent domains contain different developmental trajectories. The age at which the individual begins, peaks, and ends varies amongst and within domains.
- It is imperative that society provides opportunities to the individual to implement and exercise their skill set, but even more critical that the individual utilizes such opportunities to employ their talent.
- Psychosocial factors are critical elements within the talent development process.

The aforementioned two theories represent general models of talent development and

performance. The following theories are select models of talent development and performance that are associated with the psychology field.

Shön (1983) proposed a theory of performance development that focused on the ability of the professional to utilize reflection in their practice. The model asserts that a pragmatic-systematic approach is not always applicable, which is particularly appreciable in psychotherapy. Instead, the theory suggests that successful psychologists employ instinctual processes where they draw on their own experiences in order to efficaciously respond to clients, while simultaneously using reflection to monitor their clinical practice. Moreover, Shön's (1983) theory can be applied to the nonlinear, emotionally laden process of psychotherapy that often requires a psychologist to respond in a non-mechanistic manner.

Bloom's (1985) theory can conceivably be applied to psychologists. In the first stage, though parents may be less of a factor in the development process, college students or graduate psychologist trainees likely have to be engaged in their educational experience, as well as receive reinforcement from their instructors. If engaged, in stage two the individual will seek to continue training by moving on to graduate school; if currently training to become a psychologist, the individual will likely seek outside opportunities to strengthen their training, such as varied practicums, attending seminars, supervision, additional coursework, etc. In the third stage, the individual will seek to enhance their training opportunities by seeking diverse experiences and soliciting feedback from supervisors.

Dreyfus and Dreyfus (1986) developed a model comprised of five stages that highlight the growth in decision-making skills and perceptual abilities that occur as a person gains experience and practice in a given domain. During the first stage and in terms of psychotherapy, the novice psychologist is likely to rely on rules and procedures that govern the counseling,

diagnostic, and treatment process. As the psychologist moves into stages two through four, which includes advanced beginner, competent, and proficient, they increasingly acquire the ability to analyze each case independently and distinguish unique aspects of a situation. In stage five, which is considered the expert phase, the psychologist is able to instinctively grasp a situation and react in an efficacious manner, even while under utmost pressure to perform. Locke and Covell (1997) summarized this model as a process where the skill becomes semi-instinctive as a person gains experience, and that such abilities can be observed when the person reaches expert status.

Schmidt, Norman, and Boshuizen (1990) proposed a medical theory regarding the development of clinical decision-making performance. The theory, comprised of four stages, asserted that the individual first acquires structural knowledge about a topic, such as diagnosis or treatment planning methods. As they begin to develop networks and gain experience, they make associations between the concepts and their relative applications in clinical situations. The final stage describes the individual as having acquired experience and having the ability to recall such experiences in a manner they can rely upon in their practice.

Through a qualitative study conducted on 10 master's level psychologists, six doctoral-level psychologists, three master's level social workers, and one psychiatrist, Skovholt and Jennings (1999) proposed the first model of master psychologists (CER) that includes three domains: cognitive (C), emotional (E), and relational (R). The cognitive domain refers to the psychologist who is an avid learner and maintains mental complexity. The emotional domain includes the psychologist who is emotionally open-minded, empathic, and responsive. The relational domain includes the psychologist who is interpersonally, or socially, skilled. The CER model asserts that a psychologist must develop competencies in all three areas in order to reach

mastery in counseling. Further, the CER model competencies identified in their study are similar to other highly regarded elements of mastery development in the literature, such as factors presented in Ronnestad and Skovholt (1990, 1997); Shön (1983); Skovholt and Ronnestad (1995); and Tremmel (1993).

Furthermore, this section highlights relevant theories that intend to understand and explain the process of psychologist talent development and performance. After examination, it is apparent that each of these theories suggests that the highly successful psychologist is able to reliably recall and retrieve both knowledge and skills in order to attend to and respond to the client. At its actualized level, this process would occur in an almost instinctive manner. For the purpose of this study, Skovholt and Jennings' (1999) CER model of master psychologist development was explored. In particular, this research study examined the emotional and relational domains of this theory, and utilized Skovholt and Jennings' (1999) theory regarding the relevance and significance of emotional and relational capacities in the development and mastery of psychologists. Specifically, the CER theory is related to the competency of conducting psychotherapy (Skovholt & Jennings, 1999), which is the examined in the next section.

CER Theory and Psychotherapy

The CER theory (Skovholt & Jennings, 1999) of master psychologist development consists of three domains: cognitive, emotional, and relational. The cognitive domain focuses on the psychologist who is an enthusiastic learner, can recall a variety of previous psychotherapy experiences, and maintains cognitive intricacy. The avid, voracious learner is one who seeks continuous professional development and stays abreast of the newest theories, methodologies, treatments, trainings, relevant clinical information, and consults with colleagues. Master

psychologists who have accrued experience can reliably recall and retrieve both knowledge and skills in order to attend to and respond to clients. Finally, master psychologists appreciate ambiguity and complexity; this appreciation often leads to the desire to experiment with intricate cases where they are able to utilize their critical thinking abilities. In terms of psychotherapy, the cognitively skilled psychologist seeks to remain aware of current issues, trends, and treatments, while applying previous experiences to their work with clients and approaching psychotherapy with an appreciation for its complexity.

The emotional domain includes the psychologist who is emotionally sensitive. They can be identified as open-minded, empathic, self-aware, mature, responsive, and engaging in reflective practice (Skovholt & Jennings, 1999). Master psychologists who typically excel in the emotional domain may participate in their own personal psychotherapy, and likely engage in consultation or supervision on a consistent basis. They often seek to understand themselves better, which results in more efficacious responses to client needs. Their openness, particularly in terms of receiving feedback, helps them to grow as practitioners and refine their psychotherapy skills. Similarly, those psychologists who have attained mastery often excel at identifying their need for self-care, do so with humility, and intentionally integrate balance into their lives. As it relates to psychotherapy, the emotionally skilled psychologist has a well-developed understanding of their own thoughts, emotions, and needs, they regularly strive to be congruent in their personal and professional lives, and recognize their ongoing growth as a human.

The relational domain includes the psychologist who is interpersonally, or socially, skilled. This area suggests that the relationally skilled psychologist excels at listening, perceiving, and helping others. Skovholt and Jennings (1999) indicated that respondents in their

study displayed friendliness, compassion, respect, and a sincere interest in others. From these findings, they proposed that master psychologists might interact with others in ways that allow them to feel unique, which assists in developing the therapeutic alliance. Another hallmark of this domain is the reliance on a strong therapeutic working alliance, which creates the environment for clients to make changes and progress in psychotherapy (Bordin, 1983). Finally, master psychologists can utilize their relational skills in the most challenging situations, such as when confronting clients or managing painful or serious conversations, without severely damaging the therapeutic alliance. Respondents in this area also did not express anxiety regarding intense client emotions and indicated their comfort being present during such moments. These skills are critical in the practice of psychotherapy, as psychologists must regularly demonstrate concern and respect for clients, as well as possess the capacity to foster the therapeutic alliance by understanding and appreciating client emotions and needs.

Furthermore, the CER theory (Skovholt & Jennings, 1999) was the first proposed theory of master psychologist development. As such, research that provides additional evidence and support for the theory is necessary. To examine the theory further, the construct of emotional intelligence was employed in the current study. Specifically, the emotional and relational domains of the CER theory appear to be consistent with emotional intelligence.

Emotional Intelligence

The concept of emotional intelligence has received increasing attention since its conception by Salovey and Mayer in 1990 and more so since Daniel Goleman's (1995) publication, *Emotional Intelligence* (Bar-On, 2010; Bharti & Sidana, 2012). However, Bar-On (2010) noted that research into this construct has occurred for the majority of the twentieth century, and that the historical origins of emotional intelligence can be tracked to the nineteenth

century (Darwin, 1872/1965). When first formally proposed in 1990, Salovey and Mayer labeled the ability to identify colors, faces, and designs as “emotional intelligence” (Alloway, 2004). Initially, the construct of emotional intelligence was proposed as a secondary model of social intelligence, which was developed by Cantor and Kihstrom (1987). However, Salovey and Mayer revised the construct in 1997 to include cognitive capabilities. Presently, emotional intelligence is generally accepted as a combination of cognitions and emotions (Alloway, 2004); varying theories, however, define this construct differently.

Since its introduction to the literature, several models of emotional intelligence have emerged (Bar-On, 1988; Cooper, 1996, 1997; Goleman, 1995; Mayer, Salovey, & Caruso, 1997, 1999), and similarly, multiple definitions of emotional intelligence have been introduced (Thi Lam & Kirby, 2002). Nonetheless, emotional intelligence is commonly defined as one’s aptitude to monitor and express one’s own feelings, as well as recognize and differentiate others’ emotions in a way that can guide productive thinking and actions (Carr, 2009). In terms of achievement, emotional intelligence has been labeled a key determinant of performance, particularly within increasingly stressful work environments (Bharti & Sidana, 2012). Emotional intelligence is comprised of a set of skills, which include empathy, problem solving, optimism, and self-awareness (Romanelli, Cain, & Smith, 2006), and which are used to understand and react to emotional-laden material from one’s self and others.

In 1999, Mayer, Caruso, and Salovey conducted two studies that assisted in empirically supporting emotional intelligence as a form of intelligence, or IQ. In their study, they described emotional intelligence as meeting the three criteria of intelligence: (a) it must be operationalized as a set of abilities, (b) it should be related to pre-existing intelligences, but should also maintain unique variance, and (c) it should develop with age and experience. In the two studies, which

were conducted on samples of adults ($N=503$) and adolescents ($N=229$), the Multifactor Emotional Intelligence Scale (MEIS; Mayer, Salovey, & Caruso, 1997) was found to meet the three classical conditions of intelligence, as proposed above. Further, this study aided in establishing emotional intelligence as a meaningful construct in the psychology literature.

While several models of emotional intelligence have been offered in the literature, three primary models are commonly referenced. Likewise, *The Encyclopedia of Applied Psychology* (Spielberger, 2004) proposed three major models of emotional intelligence. These three models, which are regularly subject to debate over which one is superior, include Salovey and Mayer (1990), Goleman (1995), and Bar-On (1988; 1997). The first model, which was introduced by Salovey and Mayer (1990), argues that emotional intelligence is a form of intelligence, or a cognitive ability. The next model, by Goleman (1995), views emotional intelligence as a mixed intelligence model, which is an integration of behavioral characteristics and self-perceptions regarding one's capacity to identify, appreciate, and employ emotional information, but proposes that cognitive abilities and personality traits predict workplace performance. The third and last model, proposed by Bar-On (1997), also labels emotional intelligence as a mixed intelligence that combines both cognitive ability and personality traits, but proposes that these factors predict well-being. These models are discussed in more detail in the following subsections.

Salovey and Mayer's model.

While Bar-On first described emotional intelligence in his 1988 dissertation, Salovey and Mayer conducted the first research on this construct in 1990 and coined the term "emotional intelligence." The authors described their model, which is the most commonly referenced model of emotional intelligence in the literature, as the capability to understand one's own and others' emotions, differentiate among them, and utilize such information in directing one's cognitions

and behaviors (Salovey & Mayer, 1990). Salovey and Mayer's (1990) model of emotional intelligence falls under the ability model, as the researchers suggested that emotional intelligence is a form of intelligence, which includes information processing (Stottlemyer, 2002).

After ongoing research and increased usage of the term emotional intelligence, Salovey and Mayer recognized the need for their model to be refined. In 1997, they modified their model to reflect a combination of precise emotional analytic abilities, as opposed to their previous model, which described a single trait or ability (Ugwu, 2011). The revised model included the current four branches, or factors, of emotional intelligence that are arranged from a more basic psychological process to a more unified psychological process (see Figure 1; Mayer & Salovey, 1997). The four branches, in order, include emotional perception, emotional integration, emotional understanding, and emotional management.

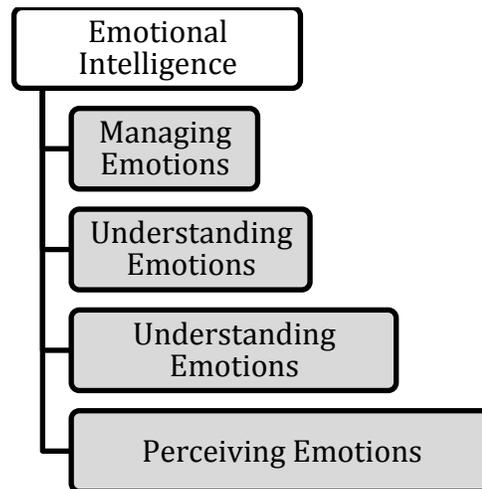


Figure 1. The four-branch model of emotional intelligence (Mayer, Salovey, & Caruso, 2000).

Mayer, Salovey, and Caruso (2000) noted that individuals who are emotionally intelligent are likely to have been raised by emotionally sensitive parents and present as non-defensive, capable of efficiently reframing emotions, selecting positive emotional role models, typically express and discuss their feelings, and exhibit advanced knowledge in a precise emotional

domain, such as leadership or social problem solving ability. In the next section, another prominent, yet different, model of emotional intelligence is discussed.

Goleman's model.

Goleman introduced the mixed model of emotional intelligence in his 1995 best-selling book, *Emotional Intelligence*. Since the release of his book and subsequent research into the role of emotional intelligence in workplace performance, this construct has become a frequently referenced term in corporate America (Mangat, 2012). Goleman's mixed model of emotional intelligence, which refers to one's self-appraised perceptions of their emotional intelligence, suggests that this construct is a combination of competencies that contribute to leadership and workplace performance. While general intelligence, or IQ, has routinely been found to be a predictor of performance (Firkowska-Mankiewicz, 2002; Ganzach, 2012; Mayes, Calhoun, Bixler, & Zimmerman, 2009; Rosander, Bäckström, & Stenberg, 2011), Goleman's theory asserts that emotional intelligence adds incremental validity to one's potential for success. Mangat (2012) noted that at times individuals in a group of similar IQs cannot be distinguished, and that in such cases, IQ becomes a minimum capability. Further, in such groups, emotional intelligence becomes a discriminating factor in identifying successful individuals. Moreover, Goleman's model (1998) includes five main constructs:

- Self-awareness: the capacity to understand one's emotions, strengths, weaknesses, drives, values, and goals and appreciate their impact on others, while using emotions to dictate decisions.
- Self-regulation: the ability for one to regulate or redirect disturbing emotions and impulses and adapt to changing circumstances, or environments.
- Social skills: the ability to manage relationships and influence people in a desired manner

- Empathy: understanding and considering others' emotions, particularly when making decisions
- Motivation: possessing the drive for achievement

Goleman's model is similar to Salovey and Mayer's (1997) model, however, his model falls under the mixed model of emotional intelligence and Goleman's model included motivation and a host of other constructs that stretched the EI construct and ultimately led to a revised model which he labeled "social intelligence" (Goleman, 2006).

Bar-On model.

In his 1988 doctoral dissertation, Bar-On utilized the term "emotional quotient" to describe what is similar to our present conceptualization of emotional intelligence. Since this time, and due to the continued emergence of emotional intelligence as a construct, Bar-On has modified his model. His current model describes emotional intelligence as interdependent emotional and social proficiencies and abilities that influence intellectual behavior (Bar-On, 1997). Additionally, this model also asserts that personality characteristics are a part of emotional intelligence. More specifically, he suggests that emotional intelligence consists of understanding one's self and others, connecting to others, and acclimating to and managing one's surrounding environment to be more effective in dealing with demands (Bar-On, 1997). For these reasons, Bar-On's model is considered a mixed model of emotional intelligence. Additionally, his model consists of five dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood. These dimensions were utilized to develop the Bar-On Emotional Quotient Inventory (EQ-i; Multi-Health Systems, 1997), and represent the five scales contained within the measure. The intrapersonal dimension consists of self-awareness and self-expression; interpersonal dimension includes social awareness and

interaction; the stress management dimension represents emotional management and control; the adaptability dimension includes change management; and general mood dimension includes self-motivation (Bar-On, 2007).

Mixed Model vs. Ability Model

When measuring emotional intelligence, two models are frequently utilized: the mixed model and ability model. Each model includes different measurement techniques and definitions of relative constructs (Petrides & Furnham, 2003; Brannick et al., 2009). Petrides and Furnham (2000a, 2000b) proposed clear distinctions between the two models. According to the authors, mixed model emotional intelligence (sometimes called the trait-model), or emotional self-efficacy, is an integration of behavioral characteristics and self-perceptions regarding one's capacity to identify, appreciate, and employ emotional information. Mixed model emotional intelligence is measured through self-report questionnaires.

In contrast, ability model emotional intelligence, or cognitive-emotional aptitude, is one's tangible capacity to identify, understand, and employ emotional information. Ability model emotional intelligence is measured through performance-based instruments of emotional intelligence that require the respondent to identify the "correct" answer (Matthews, Zeidner, & Roberts, 2012). The ability model suggests that emotional intelligence is a cognitive intelligence as it necessitates cognitive ability (Stys & Brown, 2004). This definition coincides with previous alternative theories of intelligence, which contend that intelligence is not only comprised of mental abilities, but that it also includes interpersonal and intrapersonal competencies (Das, Naglieri, & Kirby, 1994; Feuerstein, Rand, & Hoffman, 1979; Gardner, 1983; Kaufman & Kaufman, 1993). Other researchers have argued the opposite, by suggesting that the ability to perceive, understand, and manage emotional information is not a legitimate type of intelligence

(Pfeiffer, 2001; Scarr, 1989). Though the definition of intelligence is still greatly deliberated, such scholars have referred back to the traditional literature that describes intelligence as being comprised of cognitive abilities, such as numerical reasoning, problem-solving, and verbal ability (Matthews, Zeidner, & Roberts, 2012). Additionally, Scarr (1989) did not believe that classifying emotional intelligence as a form of intelligence recognized the value of personality theories; however, correlations between the ability model and personality factors have produced low associations ($r < .20$) (Van Rooy & Viswesvaran, 2004). This finding indicates that the ability model of emotional intelligence is not highly similar to personality. Moreover, Sternberg (2000) suggested that “IQ” cannot capture every aspect of human intelligence; when determining whether emotional intelligence is a true type of intelligence, we should look to whether it predicts real-life outcomes, similar to traditional cognitive intelligence assessments (Matthews, Zeidner, & Roberts, 2012). In their book on emotional intelligence, Matthews, Zeidner, and Roberts (2012) concluded from the literature that emotional intelligence should be considered part of the three-stratum model of human intellectual abilities, though further research is needed to determine whether it is its own broad factor or exists under the workings of existing factors.

Amongst the notable emotional intelligence researchers, both Bar-on (1997) and Goleman (1995) utilize the mixed model (i.e., trait-based model), whereas Mayer and Salovey (2003) are proponents of the ability model, and they represent the only ability model of emotional intelligence to-date. The ability model is moderately linked with intelligence ($r = .34$; Van Rooy, Viswesvaran, & Pluta, 2005a), as it maintains cognitive components that researchers have asserted make it suitable to be considered another form of intelligence. Additionally, previous research suggests that the ability model is distinct from personality (Brackett & Mayer, 2003; Brackett, Mayer, & Warner, 2004; Janovics & Christiansen, 2001; Van Rooy,

Viswesvaran, & Pluta, 2005a). However, mixed-model emotional intelligence, which is more personality, or disposition, is less often linked to intelligence and more commonly criticized as being too broad in scope and too similar to personality to be a distinct concept (Daus & Ashkanasy, 2003). While both the mixed model and ability model have been endorsed by varying researchers, the mixed model has received a large amount of criticism, and several researchers have asserted they do not support the mixed model (Van Rooy, Viswesvaran, & Pluta, 2005a). For these reasons, the ability model was employed in the present study.

To provide further differentiation, ability measures view emotional intelligence as a skill that integrates reason and emotion and includes a heavier cognitive component. The ability model, which is assessed through performance measures, contains items that test one's ability to recognize emotions, such as displaying a picture of a person's face and asking the respondent to label the emotion the pictured person is experiencing. This method generates a "correct" response, as the respondent is required to select their answer from a set of given choices. Different from the ability model, mixed model measures do not include cognitive capabilities, but instead ask respondents to rate themselves in terms of their perceived emotional intelligence ability. As indicated above, mixed model emotional intelligence is measured through self-report questionnaires. Furthermore, this section provided an overview of the two extant models of emotional intelligence, as well as how each model assesses emotional intelligence. The next the section closely examines Salovey and Mayer's (1997) four branches of emotional intelligence.

Salovey and Mayer's Four Branches of Emotional Intelligence

Emotional intelligence, as proposed by Salovey and Mayer (1997), contains four branches, or factors that constitute the broad ability and which were named above. The

following subsections provide more detail on each branch of Salovey and Mayer's (1997) emotional intelligence.

Emotional perception.

The first branch, called emotional perception, involves the ability for one to recognize emotion in others' facial and body expressions. This branch is considered the most basic of the four, and the authors suggest that children begin to develop this ability from a young age. A young child is often able to distinguish emotional facial expressions and respond to their parents' emotions (Mayer et al., 1997). Additionally, the individual who is able to recognize emotions in others is able to correctly interpret emotional communication through other nonverbal signals such as body language and tone of voice (Briody, 2005). The capacity to recognize emotions in others is a highly valuable social skill that requires the ability to appreciate subtle social cues (Briody, 2005). When a child or adult is able to identify their own emotions, others' emotions, and differentiate between emotional states, they are displaying emotional perception ability.

Emotional integration.

The second branch, called emotional integration, encompasses the ability for the individual to use emotions to facilitate thoughts. From birth, emotions serve as a warning system to one's environment and indicate the need for a response. As an individual grows and develops emotional maturity, their emotions are able to direct them to important changes that need to be made. When it comes to problem solving, humans typically consider their own emotions in the process of making the best decision. Sometimes, this process occurs more elusively; however, emotions regularly accompany our cognitions, and thereby affect decision-making. Similarly, emotional conditions can influence one's memory and evaluation of situations, which can lead to alterations in problem solving and decision-making. Despite the possibility of emotion being a

limiting factor in cognitive processes, Briody (2005) noted that it could assist in the prioritization of cognitive processes by helping individuals to concentrate on what is essential (as cited in Salovey & Pizarro, 2003).

Emotional understanding.

The third branch, called emotional understanding, represents the ability to recognize emotions and utilize such information. The individual who understands emotions is able to label them, integrate connections amongst those labels, and appreciate complicated relationships amongst emotions. Similarly, the individual is able to perceive differences and similarities between emotions such as frustration and anger, as well as appreciate and explain how emotions develop and progress over time. Another aspect of this ability is that the person can appreciate abrupt shifts in emotions. This capacity is important in relating to others as well as demonstrating an understanding of self (Briody, 2005).

Emotional management.

The fourth branch, called emotional management, is considered the highest level of emotional intelligence, and thereby is the most challenging of the four branches. This factor represents the ability for individuals to regulate emotions within the self and in others. Such an individual is able to control their emotions, particularly negative states, and still accomplish their goals, as well as promote both emotional and intellectual development. In the next section, relevant literature that supports emotional intelligence as a valid construct is discussed.

Emotional Intelligence as a Construct

Despite the body of research on emotional intelligence, this construct has been subject to a significant amount of scrutiny and controversy. Several authors have purported that emotional intelligence adds nothing new to the literature (Eysenck, 1998; Van Rooy, Viswesvaran, & Pluta,

2005a) and that it is not a legitimate form of intelligence since it can be increased, unlike abilities that cannot be modified (Pfeiffer, 2001). Hein (2003) asserted that emotional intelligence is simply a component of general intelligence and that it falls under Cantor and Kilhstrom's (1987) social intelligence. A review of the literature commonly yields statements that emotional intelligence is simply an extension of personality theories (Van Rooy, Viswesvaran, & Pluta, 2005a). Despite these claims, many studies have successfully demonstrated that emotional intelligence is distinct from personality, specifically when utilizing the ability model. Correlations between ability model emotional intelligence and personality factors have yielded low associations ($r < .20$). Similarly, these studies have yielded evidence that emotional intelligence contains moderate predictive validity (Van Rooy & Viswesvaran, 2004), which is further evidence that emotional intelligence appears to be measuring a unique construct.

In attempts to understand and differentiate emotional intelligence from general intelligence (or IQ), many authors have first examined the meaning of intelligence. Such authors concur that intelligence is purposeful mental activity that is recognized by useful problem solving methods, critical thinking, and efficient analysis (Neisser, Boodoo, Bouchard, Boykin, Brody, Ceci, Halpern, Loehlin, Perloff, Sternberg & Urbina, 1996; Pfeiffer, 2001; Sternberg, 1986; Stoddard, 1943). However, previous literature has yielded findings that often suggest emotional intelligence requires emotional analysis and emotional problem solving. Further, several studies have established the ability model as a distinct form of intelligence (Bar-On, 1997; Day & Carroll, 2004; Matthews, Zeidner, & Roberts, 2012; Mayer, Caruso, & Salovey, 1999; Van Rooy, Alonso, & Viswesvaran, 2005). Through meta-analysis, researchers have found that MSCEIT (Mayer, Caruso, & Salovey, 2002) scores maintained small to moderate correlations with fluid intelligence (Gf) and crystallized intelligence (Gc) ($r = .08$ to $.38$). The

highest relationship was between emotional intelligence and Gc ($r = .38$), though this correlation was not high enough to suggest a repackaging of Gc (Matthews, Zeidner, & Roberts, 2012). These research results indicate that emotional intelligence is related to general intelligence, but that it still maintains unique criterion validity.

Previously, researchers had difficulty accepting emotional intelligence as a unique construct due to limited objective data. Pfeiffer (2001) wrote about emotional intelligence and its lack of psychometrically viable measures, which was a prominent reason why authors formerly rejected emotional intelligence as a distinct construct. Since then, more scientifically sound measures have been developed and introduced. Similarly, studies have begun to establish evidence of construct validity for emotional intelligence. The following section provides empirical evidence in support of emotional intelligence as a construct.

Empirical findings.

This brief review of the professional literature contains nine studies that examine the construct validity of emotional intelligence. Each of the reviewed studies indicated that emotional intelligence has been found to maintain construct validity, and more specifically, convergent validity, predictive validity, and discriminant validity (Van Rooy, Viswesvaran, & Pluta, 2005a). For example, an empirical study of 80 doctoral-level scientists, conducted by Feist and Barron (1996), revealed that after 40 years of experience, the most successful (e.g., those who were considered experts in their fields, who were mentioned in *American Men and Women of Science*, and who possessed extensive resumes) were those whose social and emotional skills were more advanced. Specifically, the study found that emotional and social intelligence abilities were four times more important than IQ in predicting career success and

status. The findings within this study propose that emotional intelligence maintains predictive validity above and beyond IQ.

As described earlier, Mayer, Caruso, and Salovey (1999) conducted two studies utilizing the MEIS (Mayer, Salovey, & Caruso, 1997) to search for evidence that emotional intelligence is a form of intelligence. Based on the three criteria of intelligence, which include that it is a mental behavior, it is associated with pre-existing intelligences, but also maintains unique variance, and it develops with age and experience, the researchers found that emotional intelligence met each of these classical conditions of intelligence. This study, along with others that have examined similar variables (Bar-On, 1997; Day & Carroll, 2004; Mayer, Caruso, et al., 1999; Van Rooy, Alonso, & Viswesvaran, 2005b), assisted in establishing the ability model as a distinct form of intelligence, and contributes to the construct validity of emotional intelligence.

Ciarrochi, Chan, and Caputi (2000) conducted a series of evaluations over several days in one week in order to measure the construct of emotional intelligence. In the first phase, which consisted of 134 participants, the researchers administered the MEIS (Mayer, Salovey, & Caruso, 1997). Phase two included 120 participants who were randomly assigned to watch one of three mood-inducing films (positive, negative, and neutral moods) and were then asked to make evaluations of a couple. Next, participants watched another affect-inducing video and were asked to recall three memories from high school, as well as rate their mood. Phase three asked 114 participants to complete a personality assessment battery of select NEO-PI-R (Costa & McCrae, 1992) scales and the MEIS emotional intelligence measure. In phase four, 129 participants completed the Raven's Standard Progressive Matrices (ACER, 1989) IQ test. Results suggested that emotional intelligence is a construct that is distinct from IQ and that is related to empathy ($r = .43$) and life satisfaction ($r = .28$). Further, the finding that emotional

intelligence is unique from IQ provides additional support for emotional intelligence as a unique construct.

In a study examining prospective medical students, Carrothers, Gregory, and Gallagher (2000) employed a sample of 147 medical school applicants (83 females and 64 males) from three consortium medical school programs in the United States. The study was conducted to cultivate and test a 34-item self-developed instrument that measures applicants' emotional intelligence. The five scales of emotional intelligence included on this instrument were maturity, compassion, morality, sociability, and calm disposition, and yielded internal consistency coefficients ranging from .66 to .95. The researchers found that the emotional intelligence measure was minimally related to applicants' ACT score ($r = 0.084$) and GPA ($r = 0.14$), yet individual interview appraisal scores were correlated with the emotional intelligence measure ($r = 0.76$). Additionally, emotional intelligence was found to be higher in females ($M = 189.23$) than males ($M = 176.52$). Overall, the study found that the emotional intelligence measure assisted in identifying applicants who possessed emotional intelligence and who were oriented toward social services and humanities disciplines. This study provides support for emotional intelligence as a construct that is distinct from cognitive performance.

Thi Lam and Kirby (2002) conducted a study on 304 undergraduate students, where they administered the MEIS (Salovey & Mayer, 1997) and the Shipley Institute of Living IQ Scale (Shipley, 1940), as well as a subset of items from the Burney logical reasoning measure to measure the effect of emotional intelligence on cognitive-performance above and beyond IQ. Through regression analyses where the IQ variable was entered first, the researchers found support for three of their four hypotheses. The results included that overall emotional intelligence added to individual cognitive performance beyond IQ ($R^2 \text{ change} = .034$, $F(2, 290)$

= 11.37, $p < .001$), perceiving emotions added to individual cognitive performance beyond IQ (R^2 change = .074, $F(2, 292) = 23.24$, $p < .001$), and regulating emotions added to individual cognitive performance beyond IQ (R^2 change = .024, $F(2, 290) = 7.59$, $p < .01$), but found that understanding emotions did not add incremental validity (R^2 change = .008, $F(2, 290) = 2.75$, $p > .05$). From these findings, the authors generally concluded that emotional intelligence contributes to cognitive-based performance over and above what can be attributed to general intelligence. Further, this study yielded evidence that emotional intelligence maintains incremental validity and discriminant validity from IQ, as it added predictive value to cognitive-based performance and appeared to measure a concept distinct from general intelligence. While the findings contained within this study are significant, limitations include the use of situational measures of general intelligence, similarities of the individuals in the sample, and limited reliability of the MEIS (Salovey & Mayer, 1997) test.

In order to examine the effects of emotional intelligence in instruction and academic performance, Jaeger (2003) examined 158 students from five different sections of a general management graduate-level course at a university in the northeastern United States. The study included an intervention group consisting of 31 students who were specifically taught emotional intelligence concepts. The researchers utilized the Emotional Quotient Inventory (EQi; Bar-On, 1997) to assess emotional intelligence in the sample. While both groups' emotional intelligence scores significantly improved, $t(149) = 4.71$, $p < .001$, the intervention group demonstrated much greater increases in emotional intelligence between pre and post testing, $t(30) = 4.53$, $p < .001$. Additionally, the results of the study found that emotional intelligence was positively related to academic performance ($r = .39$, $p < .05$), as measured by final project grades. This study provides evidence that emotional intelligence can be learned and also lends support to the

predictive validity of emotional intelligence. Despite such findings, the EQi (Bar-On; 1997) measure utilized in this study contains questionable reliability, which should be considered by researchers conducting similar studies.

In a study examining the relationship between perceived stress and emotional intelligence in 233 undergraduate dental students, Pau and Croucher (2003) employed the Schutte Self-Report Emotional Intelligence Test (SSEIT; Schutte et al., 1998) and the Perceived Stress Scales (PSS-10; Cohen, Kamarck, & Mermelstein, 1983). The findings suggested that emotional intelligence and perceived stress were inversely related, which indicates that those students with higher emotional intelligence did not endorse as many stress items and did not identify themselves as stressed. This may mean that students with high emotional intelligence are better equipped to manage stressful situations, as well as create and maintain balance in their life. In terms of construct validity, this study demonstrates that emotional intelligence maintains concurrent validity as it can be used to assess well-being.

In another study by Pau et al. (2004), the researchers were seeking to understand how 10 United Kingdom dental school undergraduate students cope with stress, as moderated by level of emotional intelligence. The study utilized a mixed-methods design where they conducted face-to-face interviews and administered the SSEIT (Schutte et al., 1998). The results suggested that students who possessed higher levels of emotional intelligence were more likely to utilize contemplation, assessment, and social approaches when coping with stress. Further, students with low emotional intelligence were more likely to engage in unhealthy and harmful behaviors (e.g., drinking, use of tobacco, excessive eating, etc.) to manage stress. Similar to the study by Pau and Croucher (2003), this study provides additional support for the concurrent validity of emotional intelligence. It should be noted that the researchers utilized a qualitative design that

required the interviewer to draw conclusions from the interviews, which is a possible limitation of this study.

More recently, Van Rooy, Viswesvaran, and Pluta (2005a) conducted a meta-analysis of 58 studies to examine the construct validity of emotional intelligence, as well as the association between mixed-model and ability-model measures of emotional intelligence. In the second part of their study, the authors examined the degree of association between each model and cognitive ability, as well as the Big Five personality scales. The popular mixed model measures included in this study were the SSEIT (Schutte et al., 1998); EQ-i (Bar-On, 1997); Trait Meta Mood Scale (TMMS; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995); and the Emotional Judgment Inventory (EJI; Bedwell, 2002). The MEIS (Mayer, Salovey, & Caruso, 1997), the MSCEIT's predecessor, and Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer, Caruso, & Salovey, 2002) were the only ability-based measures included in the review. The results indicated that mixed model measures are highly similar ($r = .71$), but that mixed-model measures and ability-model measures were dissimilar ($r = .14$). Further, mixed model measures were found to have higher correlations with the Big Five personality factors ($r > .30$), whereas ability model measures were distinct (no correlation exceeded $.20$) from the Big Five. This finding is consistent with previous studies that suggest the ability model is distinct from extant personality models (Van Rooy, Viswesvaran, & Pluta, 2005a). Additionally, ability measures were found to have a higher association with cognitive capacities ($r = .34$) than mixed measures ($r = .13$). Roberts et al. (2001) noted that ability model measures typically require greater cognitive capacity and have yielded correlations of $.30$ and higher. Due to the discrepancies between measures corresponding with each model, future studies should include measures that represent both the ability and mixed model in order to serve as a validity check for their findings.

Moreover, in terms of the ability model, the results of this study provide support for discriminant validity when examining emotional intelligence as a construct.

In another more recent attempt to differentiate emotional intelligence as a unique concept, Romanelli, Cain, and Smith (2006) conducted a meta-analytic review of the aforementioned studies in order to identify patterns, as well as to search for evidence of emotional intelligence as a predictor of academic or professional performance in the previous literature. The meta-analysis described a total of eight studies that were all successful in finding support for emotional intelligence as a construct. From these studies, the authors concluded that emotional intelligence appears to be a promising construct that may positively influence the therapeutic relationship between clients and health practitioners, such as psychologists. They suggested that future studies and degree programs should utilize the construct of emotional intelligence as a method of predicting academic performance, in addition to conventional markers such as intelligence. Additionally, the researchers also reviewed four of the major measures of emotional intelligence, noting that most measures of emotional intelligence are based on self-report, though performance-based measures may be more promising due to their reliability.

This section provided an empirical review of the studies that have attempted to establish emotional intelligence as a construct. While emotional intelligence has been subject to a significant amount of criticism, several studies, including Feist and Barron (1996); Mayer, Caruso, and Salovey (1999); Ciarrochi, Chan, and Caputi (2000); Carrothers, Gregory, and Gallagher (2000); Thi Lam and Kirby (2002); Jaeger (2003); Pau and Croucher (2003); and Pau et al. (2004) have successfully found evidence for emotional intelligence as a distinct, unique construct. The next section addresses differences between tests that assess the mixed and ability

models of emotional intelligence, as well as examines four commonly utilized measures of emotional intelligence that follow the ability model or mixed model.

Tests that Measure Emotional Intelligence

In the last decade, there has been a notable increase in the development of instruments that seek to measure emotional intelligence. Pfeiffer (2001) noted that, at the time, there were no psychometrically rigorous emotional intelligence measures. In the past ten years, researchers have succeeded at developing valid and reliable measures of emotional intelligence (Spector, 2005; Stratton, Saunders, & Elam 2008). Some commonly employed instruments that provide evidence of reliability and validity include the Mayer-Salovey-Caruso Emotional Intelligence Test (MCSEIT; Mayer, Salovey, & Caruso, 2002), the Self-Report Emotional Intelligence Test (SSEIT; Schutte et al., 1998), and the Emotional Judgment Inventory (EJI; Bedwell, 2002). Other well-known measures of emotional intelligence include the Emotional Quotient Inventory (EQ-i; Multi-Systems Health, 1997) and Emotional Competence Inventory (ECI; Goleman, 2002).

These measures most notably differ in the manner which they assess one's emotional intelligence. For example, most emotional intelligence instruments utilize response methods such as self-report, situational judgment, and multiple-choice designs (Maree, 2007). While self-report instruments are commonly utilized to measure mixed-model emotional intelligence, self-report methods can be particularly biased, and biases are harder to capture if there are no response bias indicators or validity indicators included in the instrument (Van Rooy & Viswesvaran, 2007). Situational judgment responses, which are used in the ability model, require that the respondent read a scenario and select a response from a set of given, multiple-choice options.

There is debate in the literature regarding the utility of self-report instruments, which are used to measure mixed-model emotional intelligence, as correlations with performance ability have been found to be modest (Mayer, Salovey, Caruso, & Sitarenios, 2003). With regard to academic performance, the literature has shown varied results concerning the relevance of mixed-model emotional intelligence. Using mixed-model emotional intelligence measures, several studies have demonstrated no effect, or extremely low associations, between measures of emotional intelligence and academic performance (Barchard, 2003; Parker, Summerfeldt, Hogan, & Majeski, 2004; Petrides et al., 2004; Tok & Morali, 2009), while others have found a positive relationship between the two variables (Barchard, 2003; Downey, Mountstephen, Lloyd, Hansen, & Stough, 2008; Jaeger, 2003; Schutte et al., 1998). Apart from academic performance, studies have suggested that high mixed-model emotional intelligence may be a predictor of happiness, reduced somatic ailments, and increased coping styles (Freudenthaler, Neubauer, Gabler, Scherl, & Rindermann, 2008; Kluemper, 2008; Petrides, Pita, & Kokkinaki, 2007). On the other hand, ability-based models of emotional intelligence have been found to relate to academic performance, social competencies, leadership abilities, and critical thinking. The following sections examine four commonly referenced measures of emotional intelligence.

Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT).

The MSCEIT (Mayer, Caruso, & Salovey, 2002) is a 141-item test that includes four scales: perceiving emotions, using emotions, understanding emotions, and managing emotions. Scales are measured through subscales that include: faces, pictures, sensations, facilitation, changes, blends, emotion management, and social management. Several studies have been conducted to evaluate the reliability and validity of the MSCEIT (Mayer, Caruso, & Salovey, 2002), which follows from the Salovey and Mayer (2000) model. The authors normed the

measure on 5,000 respondents at 50 sites worldwide. In the norming group, test-retest reliability after three weeks was $r = .86$ (Bracket & Mayer, 2003). The researchers provide internal consistency coefficients for the four factors of their model that ranged from $r = .80$ to $.90$ and $r = .90$ for the whole test (Mayer et al., 2003). Additionally, the MSCEIT was found to correlate with measures of intelligence (IQ), with correlations ranging from $r = .05$ (Ciarrochi, Chan, & Caputi, 2000) to $r = .38$ (Mayer et al., 1999), depending on the measure of intelligence.

Likewise, the MSCEIT (Mayer, Caruso, & Salovey, 2002) has been found to correlate moderately to measures of psychological well-being ($r = .28$) and to two of the Big Five personality factors as measured by the NEO Personality Inventory – Revised (NEO-PI-R; Costa & McCrae, 1992; $r = .25$ for Openness and $r = .28$ for Agreeableness; Brackett & Mayer, 2003). Different studies have found the MSCEIT to possess both concurrent and predictive validity, which constitute criterion validity. More specifically, the MSCEIT has been found to be related to academic performance ($\beta = 0.25$; $p = .023$), and significantly with job performance ($r = .28$), higher levels of customer service ($r = .46$), rankings of team leader effectiveness ($r = .51$), parental warmth ($r = .23$; Pusey, 2000; Rice, 1999; Mayer et al., 1999), critical thinking abilities ($r = 0.41$), help seeking ($r = 0.33$), and social learning ($r = 0.32$), which were all significant at the $p < .05$ level.

Nonetheless, the MSCEIT (Mayer, Caruso, & Salovey, 2002) is not without its limitations. Matthews, Zeidner, and Roberts (2012) discussed its complex scoring system that does not contain any conclusively true answers. Unlike cognitive intellectual assessments where mathematic problems have one precise answer, the manner in which each individual person approaches an emotional situation differs, making it more challenging to assess emotional intelligence. To attempt to resolve this problem, the authors provide two scoring methods:

expert scoring and consensus scoring. The expert scoring method was normed on emotion researchers and the consensus scoring method was normed on a typical normative sample where the most-selected response item became the “correct” answer. In both methods, the “best” answer was identified and is now considered the “correct” answer when scoring the test. The expert scoring method and consensus scoring method are highly associated, with correlations exceeding $r = .90$ (Mayer et al., 2001). For the purpose of the present study, the expert scoring method was used since the sample included professional psychology doctoral students who were at the outset of their doctoral program or who presumably have had training in emotional identification and management during their doctoral academic experiences.

After their respective reviews of the literature, Spector (2005) and Lewis et al. (2005) suggested that the MSCEIT (Mayer, Salovey, & Caruso, 2002) is the preferred measure of emotional intelligence due to its acceptable validity. Based on the results of their study, Stratton, Saunders, and Elam (2008) suggested that future studies examining emotional intelligence should utilize the MSCEIT as its ability-based method of assessment may assist in determining whether cross-sectional changes in emotional intelligence are valid or artificial. Finally, Romanelli, Cain, and Smith (2006) recommended that ability-based tests of emotional intelligence, such as the MSCEIT, might be more reliable since they measure performance and not perceptions provided in self-report measures.

Schutte Self-Report Emotional Intelligence Test (SSEIT).

The Schutte Self-Report Emotional Intelligence Test (SSEIT; Schutte et al., 1998) is a 33-item measure of emotional intelligence that relies on respondent self-report. The test reflects Mayer and Salovey’s (1997) model of emotional intelligence and its four factors, which include understanding emotions in one’s self and others, expressing emotions, regulating emotions in

one's self and others, and utilizing emotions in problem solving. The SSEIT (Schutte et al., 1998) measures mixed-model (i.e., trait-based) emotional intelligence. The test utilizes a 5-point Likert scale with qualitative responses ranging from "strongly disagree" to "strongly agree." The test was developed on a sample of 346 participants and yielded a Cronbach's alpha internal consistency coefficient of .90; likewise, a mean alpha of .86 has been found across several diverse samples (Schutte, Malouff, & Bhullar, 2009), which suggests high reliability. Two-week test-retest reliability was .78 for total scale scores. Principal component analyses yielded a strong first factor that represented all four factors of Salovey and Mayer's (1997) model (Schutte, Malouff, & Bhullar, 2009). Sample items include:

- Other people find it easy to confide in me.
- I know why my emotions change.

Emotional Judgment Inventory (EJI).

The Emotional Judgment Inventory (EJI; Bedwell, 2002) is an 80-item self-report test that is based on Salovey and Mayer's (1990) model of emotional intelligence and that examines an individual's typical emotional intelligence performance in seven areas, each corresponding with a distinct scale: Being Aware of Emotions, Identifying Own Emotions, Identifying Others' Emotions, Managing Own Emotions, Managing Others' Emotions, Using Emotions in Problem Solving, and Expressing Emotions Adaptively. The measure utilizes a 7-point Likert scale, with responses ranging from "absolutely disagree" (1) to "absolutely agree" (7), and high scores indicating higher self-perceived emotional intelligence. The measure was normed on 1,283 individuals where 40% were college students, while others in the norming group were identified through work placement services and workplaces. The EJI contains acceptable to high

reliability, with internal consistency coefficients ranging from .76 to .88 (Easton, Martin, & Wilson, 2008).

According to Bedwell (2002), the seven scales represent the following: (a) being aware of emotions is the capacity to attend to emotions within oneself and others; (b) identifying own emotions is the capacity to accurately understand one's own emotions and discern between similar emotions; (c) identifying others' emotions is the capacity to correctly identify others' emotions and discern between similar emotions in others; (d) managing own emotions is the capacity to produce and communicate appropriate emotions in order to control positive emotions and cope with negative or undesirable emotions; (e) managing others' emotions is the capacity to comfort, inspire, and produce enjoyment or zeal in others; (f) using emotions in problem solving is the capacity to understand the impact that emotions have on cognitive performance; and (g) expressing emotions adaptively is the capacity to display emotions that lead to a preferred result.

Bar-On Emotional Quotient Inventory (EQi).

The Emotional Quotient Inventory (EQi; Bar-On; Multi-Systems Health, 1997) is the most frequently used self-report measure of emotional intelligence (Van Rooy, Viswesvaran, & Pluta, 2005a) and consists of 133 items that measures five emotional intelligence dimensions: intrapersonal, interpersonal, adaptability, stress management, and general mood, as well as provides a total score of emotional intelligence. The test yields four validity scale scores, a total emotional intelligence score, five scale scores, and 15 emotional intelligence subscale scores (Bar-On, 2004). The measure contains adequate reliability, with alpha internal consistency coefficients ranging from .69 to .86 (Bar-On, 1997); however, data suggests that the EQi may contain weak validity (Romanelli, Cain, & Smith, 2006). Additionally, due its reliance on the mixed model of emotional intelligence, which closely aligns with measures of personality, the

EQi may overlap significantly with personality constructs. Another limitation is the self-report nature of the measure, as it does not assess emotional intelligence ability or performance, and may be subject to increased instances of participant faking (Grubb & McDaniel, 2007). Despite these potential limitations, the EQ-i (Bar-On, 1997) is a commonly employed measure. The measure utilizes a 5-point Likert scale and respondents indicate their level of agreement with items such as:

- I'm unable to understand the way other people feel.
- It's hard to express my intimate feelings.

Emotional Competence Inventory (ECI).

The Emotional Competence Inventory (ECI), developed by Goleman (2002), is based on the four dimensions of his model of emotional intelligence. The four dimensions, or scales, which include self-awareness, self-management, social awareness, and social skills are represented by 18 subscales. The four scales represent the following: (a) the self-awareness scale examines one's self-knowledge of preferences, emotions, strengths, and limitations; (b) the self-management scale is one's ability to manage their emotions, strengths, and limitations; (c) the social awareness scale is how one manages relationships and others' emotions, desires, and fears; and (d) the social skills scale is one's ability to stimulate a wanted response in others. The normative sample included 6,000 respondents in North America and the United Kingdom and was largely comprised of Caucasian males in mid to senior level management work positions (Sala, 2002). The manual suggests that the measure contains internal consistency coefficients ranging from .73 to .92 for the "others" ratings and .60 to .85 for self-assessment ratings (Sala, 2002).

Development of Emotional Intelligence

The existing studies on emotional intelligence have commonly concluded with questions regarding how emotional intelligence develops and even more frequently, how level of emotional intelligence might be increased. Many researchers have hypothesized that emotional intelligence can be taught through instruction (Dulewicz & Higgs, 2000; Mayer et al., 2002; Mayer et al., 1999; Langley, 2000; Marinez-Pons, 2000; Nelis, Quoidbach, Mikolajczak, & Hansenne, 2009; Slaski & Cartwright 2003; Satterfield & Hughes 2007; Ulutas & Omeroglu 2007; Watkin, 2000) and may be advanced through the acquisition of knowledge and abilities (Easton, Martin, & Wilson, 2008). Other theorists have suggested that emotional intelligence increases with age and through acquired experiences (Bar-On, 1997; Day & Carroll, 2004; Mayer, Caruso, et al., 1999; Van Rooy, Alonso, & Viswesvaran, 2005a).

While the ability model and mixed model differ in terms of what variables are included in emotional intelligence and how emotional intelligence is measured, both models generally agree that emotional intelligence can be modified. The ability model, which is supported by Mayer and Salovey, views emotional intelligence as a form of intellectual intelligence, while the mixed model, supported by Goleman and Bar-On, depicts emotional intelligence as similar to personality or traits. From the previous literature, it is understood that the mixed model aligns with the view that emotional intelligence is a competency that can be increased. Contrastingly, the term “ability” within the ability model implies that emotional intelligence is a construct that is fixed. Nonetheless, Mayer et al. (2002) asserted that emotional intelligence is an ability that is generally stable, but that it progresses over time and is likely to increase through development. Likewise, Rieck and Callahan (2013), who conducted research from the ability model perspective, agreed that individuals have innate emotional intelligence ability, but that personal

growth and experiences influence one's emotional intelligence range of functioning. Overall, it can be concluded that both the ability model and mixed model view emotional intelligence as a construct that can be developed.

Moreover, previous literature supports the notion that emotional intelligence is likely an ability, but that through development and instruction it can be increased. This suggests that doctoral students in professional psychology programs may witness increases in their emotional intelligence functioning as a result of their didactic and clinical training. The exact nature of psychology doctoral programs is consistent with the type of instruction that is necessary to train individuals to perceive, integrate, understand, and manage emotions. Furthermore, based on previous research, it is conceivable that psychology doctoral students' ability-model emotional intelligence scores would likely increase due to their engagement in doctoral program curriculum, practicum experiences, internship, supervision, seminars, professional trainings, and through ongoing interaction with clients.

For example, typical professional psychology doctoral courses that focus on theory, individual psychotherapy techniques, group therapy, training in supervision, and supervision of students' clinical work may increase doctoral students' scores on all four emotional intelligence scales. These courses emphasize consistent reflection on trainees' clinical work, as well as reflection on their clients' or supervisees' current situations, which assists in developing the doctoral student's conceptualization of emotional material. Further, accumulated coursework in a professional psychology program may increase the specific branches of integrating, understanding, and managing emotions. Other doctoral graduate program experiences, such as practicum and internship, provide the doctoral trainee with opportunities to conduct individual therapy, couples therapy, group therapy, and participate in supervision. These experiences

facilitate doctoral students' ability to perceive emotions in clients and monitor emotions in themselves, utilize emotional information to connect ideas and communicate feelings, consistently consider clients' emotional information and make connections between emotional events, and moderate their own and clients' emotions in order to support client growth, as well as manage emotions to increase psychotherapy outcomes. Moreover, as students acquire ongoing experience in a clinical, counseling, or school psychology doctoral program and progress each year, emotional intelligence scores are expected to continuously increase. The following section addresses empirical findings that have been associated with the development of emotional intelligence.

Empirical findings.

The examination of the progression of emotional intelligence has received increased attention in the past decade. This section examines nine studies that have specifically researched emotional intelligence development. While two of the reviewed studies did not find evidence that emotional intelligence increased, seven of the studies found significant and positive results. For example, in Jaeger's (2003) study that was described above, 158 students in five sections of general management graduate-level courses at a university in the northeastern United States were examined to test whether emotional intelligence increases through instruction. The intervention group, which consisted of 31 students, was taught emotional intelligence concepts over the course of one semester in addition to the regular management material that all five sections received. The other four sections, which were called the "non-curriculum" group, did not receive emotional intelligence instruction. The researchers utilized the EQi (Bar-On, 1997) to assess emotional intelligence in the sample. While both groups' emotional intelligence scores improved, the intervention group demonstrated significant increases in emotional intelligence

between pre and post testing. This study provided preliminary support for the capacity to teach and develop emotional intelligence in graduate students.

Nelis, Quoidbach, Mikolajczak, and Hansenne (2009) conducted a study on 37 French-speaking young adults to examine whether emotional intelligence could be taught and increased. The researchers utilized a training group ($n = 19$) and a control group ($n = 18$) to measure the effect of a group intervention on increases in emotional intelligence. The training was developed based on Salovey and Mayer's (1997) model of emotional intelligence, and included four two and a half hour training sessions that were separated by one week, and a follow-up assessment at six months. Individual t -tests found that there were no baseline differences between the training group and control group. Repeated measures ANOVAS were conducted for group (training vs. control) and time (time 1, time 2, and time 3). The study revealed that the training group scored significantly higher on the Trait Emotional Intelligence Questionnaire (TEIQue; Petrides, 2009) after training [$t(18) = -2.29, p = .033$] than the control group [$t(17) = -0.13, p = .90$]. Additionally, the training group demonstrated significant increases in two of the four branches (emotion identification and emotion management). These findings were confirmed at a six-month follow-up, which suggests that results were stable and training in emotional intelligence can yield a lasting effect. This study provided preliminary support for the ability to increase emotional intelligence through instruction.

Todres, Tsimtsiou, Stephenson, and Jones (2010) utilized a cross-sectional design to explore emotional intelligence and its association with age, gender, ethnicity, and year of study ($n = 5$) in a group of 263 London medical students. The researchers collected demographic information in addition to employing the online version of the MSCEIT (Mayer, Caruso, & Salovey, 2002). The findings indicated that women scored higher than men on all four scales of

the measure ($M = 102.6, p < .05$), participants under age 25 scored lower in the understanding and managing emotions branches ($M = 105.4, p < .05$), and final year students scored significantly higher in the managing emotions domain ($M = 102.5, p < .05$); through regression analyses, the authors found that these three variables accounted for 9.2% of the variation in total MSCEIT scores. Year of study also accounted for 6.7% of the variance in the managing emotions domain. No differences were found across years for total emotional intelligence scores. These results suggested that medical school curriculum may have a positive effect on students' ability to manage their emotions (Todres, Tsimtsiou, Stephenson, & Jones, 2010); in the present study, it was hypothesized that psychology doctoral program curriculum would have a similar effect on students. In terms of ethnicity, Asian and Asian British participants scored lower than the Caucasian group. The use of the online version of the MSCEIT was a notable strength of this study as it increased speed and analysis of data collection. Additionally, according to the authors, the study was the first to examine emotional intelligence in medical undergraduates. Limitations within this study include its overrepresentation of females, Caucasian participants, and ethnically mixed individuals, and underrepresentation of final year students. Additionally, only one measure was used, which may limit the results of the study.

Some studies report that interventions can effectively increase emotional intelligence (Slaski & Cartwright, 2003; Satterfield & Hughes, 2007; Ulutas & Omeroglu 2007). For example, in Slaski and Cartwright (2003), the researchers examined whether emotional intelligence can be increased in a sample of managers ($N = 120$), who were divided into two matched groups: the training group ($n = 60$), who received the emotional intelligence training treatment on one day per week for four weeks, and the control group ($n = 60$), who did not receive the treatment. To measure emotional intelligence, the researchers administered the EQi

(Bar-On, 1997) to both groups, and also assessed the training group with the EIQ (Dulewicz & Higgs, 1999, 2000) in order to provide additional evidence of changes in emotional intelligence. The study found that these measures correlated moderately and significantly ($r = .633$). Other assessments included the General Health Questionnaire (GHQ 28; Goldberg & Hillier, 1979; Goldberg & Williams, 1998) and the Queensland Public Agency Staff Survey (QPASS; Hart et al., 1996), which assesses organizational stress and quality of work life. Independent *t*-tests revealed that prior to the training intervention, there were no significant differences between groups. After the intervention was employed, the training group's EQi (Bar-On, 1997) scores significantly increased by 5.2 points ($p < .001$), while EIQ scores (Dulewicz & Higgs, 1999, 2000) increased by 11.2 points for the training group (two tailed $p < .000$). From these results, the authors concluded that emotional intelligence could be learned. Strengths in this study include its use of a matched sample, the use of an intervention, and the inclusion of two emotional intelligence measures to validate changes in emotional intelligence scores.

A review by Satterfield and Hughes (2007) also found that emotional skills could be taught. Their review initially examined 161 articles that broadly discussed beginner emotion skills programs for medical students and was then systematically reduced to 26 studies that examined 'others directed' emotion skills. The researchers found that the emotion skills programs in the assorted studies varied in terms of direct contact hours, session frequency ranging from one session daily to one session every six months, training ranging from two weeks to two years, different training methods, and outcomes; moreover, 15 of the 26 studies used objective emotion skills measures, six of the studies employed a control group, and five utilized a randomized, controlled design. Of the five randomized, controlled design studies, findings revealed that participants demonstrated improvements in affective communication, empathy,

identifying emotions, caring behaviors, and enhanced patient understanding. These findings resulted in the authors concluding that training in ‘others’-directed’ emotion skills is important, as evidenced by the controlled trials’ positive results, though the authors did not suggest specific curriculum, curriculum frequency, or duration. Further, this review supports the theory that emotional competencies can be learned through medical courses that focus on teaching emotional skills.

Ulutas & Omeroglu (2007) assessed the impact of emotional intelligence instruction on a sample of ($N = 120$) 6-year-old children. Participants were divided into three even groups: an experimental group consisting of 40 children, a control group consisting of 40 children, and a placebo group consisting of 40 children. The experimental group participated in a 12-week emotional intelligence program, the placebo group participated in their regular daily activities, and the control group did not receive any treatment. The researchers utilized the Sullivan Emotional Intelligence Scale (SEIS; Sullivan, 1999) to test participants’ emotional intelligence, the Sullivan Brief Empathy Scale for children (SBES; Sullivan, 1999) to measure empathic reactions, and the Sullivan Teacher Rating Scale of Emotional Intelligence for Children (Sullivan, 1999) to rate participants’ emotional intelligence. The researchers found that the experimental group’s emotional intelligence scores increased significantly compared to the control group and placebo group. Using an ANCOVA analysis, the study found that the experimental group’s emotional intelligence scores significantly increased ($F(2, 357) = 205.19, p < .001$) after receiving the emotional intelligence training.

In another study assessing the development of emotional intelligence, Stratton, Saunders, and Elam (2008) sought to examine the constructs of emotional intelligence and empathy in 64 medical students (35 males, 29 females) in the United States. Specifically, they were seeking to

understand how these constructs change over time and through immersion in medical school. The study utilized the TMMS (Salovey et al., 1995) and the DIRI (Davis, 1980) to assess changes over time; the participants were initially assessed during their first year orientation and again during their third year clerkship training. The researchers found that participants' ability to think about feelings ($M = 4.12$ [T1], $M = 3.97$ [T2], $p < .05$) and control their moods ($M = 4.19$ [T1], $M = 3.9$ [T2], $p < .001$) demonstrated a small, but significant decrease. Similarly, the results indicated a significant decrease in participants' empathic concern ($M = 4.25$ [T1], $M = 3.97$ [T2], $p < .001$). However, students' capacity to appreciate their own moods remained the same from pretest to posttest and the personal distress scale increased considerably from the first to third year ($M = 1.87$ [T1], $M = 2.13$ [T2], $p < .01$). It should be noted that the questionnaires utilized in this study rely on participant self-report, which may potentially reduce the validity of the study.

In Malaysia, Saibani et al. (2012) conducted a study to examine differences in emotional intelligence over time in a sample consisting of engineering and architecture students. The study specifically looked at changes in emotional intelligence between year one and graduation. The study utilized the Malaysian EQ Inventory (MEQI; Noriah et al., 2003), which the authors state assesses the five domains of Goleman's (1995) model, including self-awareness, self-regulation, self-motivation, empathy, and social skills. In order to evaluate participants in Malaysian culture, the authors added two domains, which were spirituality and maturity, for a total of seven domains plus a total emotional intelligence score. Participants completed the MEQI (Noriah et al., 2003) during their first year in their program, and those students who continued in their program took the measure during each of the remaining years. Only 99 students were available to be assessed at both time intervals (first year and graduation). The results of the study found

that social skills and maturity were the only two scales that increased over time, and that self-awareness, self-regulation, self-motivation, empathy, and total emotional intelligence scores slightly decreased, while spirituality remained the same. These findings suggest that social skills and maturity can be increased over time and results may indicate that students believed their four-year education increased their social skills and maturity. The researchers attributed the declining scores on five of the seven scales to a rigorous final year that may have precluded students from developing the other domains assessed in the study.

The authors' inclusion of students from each year of study provided additional information that added to the data set, and also allowed for comparisons to be made between groups. Despite the findings in this study, the authors did not provide evidence of reliability and validity for the MEQI (Noriah et al., 2003) measure that was used. This is a major limitation of this study, as the reader cannot determine the validity of the measure, and therefore the internal and external validity of this study may be greatly reduced. It is also questionable whether the MEQI (Noriah et al., 2003) is sensitive to change, which may explain why significant differences were not found for six of the eight dependent variables. Similarly, due to the longitudinal nature of this study, many initial participants were no longer enrolled in their academic program or did not choose to participate in the final assessment, which resulted in a reduced response rate and may be indicative of self-selection bias. Finally, the researchers did not report statistical analyses findings in a table or in the text and they did not conduct an analysis to determine if there were differences in emotional intelligence between groups (i.e., engineering and architecture students).

Moreover, this section provided evidence of the potential for emotional intelligence to be increased. The reviewed studies suggest that emotional intelligence can be developed through

immersion in helping-profession graduate coursework, as well as taught through specific interventions, such as emotional intelligence trainings and instruction (Jaeger, 2003; Nelis, Quoidbach, Mikolajczak, & Hansenne, 2009; Satterfield & Hughes, 2007; Slaski & Cartwright, 2003; Ulutas & Omeroglu, 2007) and that findings are stable at follow-up. In Todres, Tsimtsiou, Stephenson, and Jones' (2010) cross-sectional study, the authors found support that managing emotions appears to increase as one acquires experience in an academic program, which was similar to Satterfield and Hughes (2007), who found that emotional intelligence increased through engagement in medical coursework. In the present study, it was hypothesized that clinical, counseling, and school psychology doctoral students would demonstrate similar changes in emotional intelligence resulting from immersion into a doctoral graduate program. While mixed results have been found regarding the mechanism through which emotional intelligence increases, researchers have commonly reported that emotional intelligence is related to performance, which is addressed in the next section.

Emotional Intelligence and Performance

Emotional intelligence has been the focus of numerous studies on performance and success. Such studies have examined emotional intelligence in the context of academia (Brackett & Mayer, 2003; Duran et al. 2006; Jaeger, 2003; Mestre et al., 2006; Petrides & Furnham, 2003; Rode et al. 2007; Stone, Parker, & Wood, 2005), workplace behaviors (Ashkanasy & Daus, 2005; Cavallo & Brienza, 2004; Ciarrochi, 2005; Lopes, Côté, & Salovey, 2006), public speaking (Rode et al., 2007), management (Lopes et al., 2005), and overall performance (Van Rooy & Viswesvaran, 2004). A relevant amount of research has demonstrated that emotional intelligence is linked to positive outcomes, particularly in the workplace (Bharti & Sidana, 2012; Cherniss, Extein, Goleman, & Weissberg, 2006; Lopes et al., 2004). Some studies have found

that emotional intelligence moderated the association between cognitive and academic performance in high-school populations (Di Fabio & Palazzeschi, 2009; Petrides, Frederickson, & Furnham, 2004). The guiding theory behind these studies purports that emotional intelligence is a fundamental feature of performance, and that in many cases, emotional intelligence adds unique variance to one's potential for performance in a given domain. Similarly, it is likely that clinical, counseling, and school psychology doctoral students possess relative baseline emotional intelligence and that acquired experience in the psychology field increases one's potential for higher emotional intelligence, and correspondingly, performance. In the following subsection, empirical findings are presented that examine the relationship between emotional intelligence and performance.

Empirical findings.

This section reviews seven studies that have found evidence of an association between emotional intelligence and performance. In Thi Lam and Kirby's (2002) study of 304 undergraduate students, which was discussed above, the authors investigated and found that emotional intelligence contributes to cognitive-based performance over and above what can be attributed to general intelligence. Further, this study yielded preliminary support for the incremental validity and discriminant validity of emotional intelligence, as it added predictive value to cognitive-based performance and appeared to measure a concept distinct from general intelligence.

In order to examine the relationship between emotional intelligence and academic performance, Van der Zee, Thijs, and Schakel (2002) recruited 116 high school students to complete an unnamed measure of emotional intelligence, the General Aptitude Test-Battery (GATB; US Department of Labor, 1970) to measure academic intelligence, the Connector-P³

(T'Mannetje & Schattenberg, 1996) to measure the Big Five factors of personality, and self and others' ratings of empathy, autonomy, and emotional control. The findings revealed that peer ratings of emotional intelligence dimensions, including empathy ($r = .65; p < .01$), autonomy ($r = .59; p < .01$), and emotional control ($r = .56; p < .01$), were predictors of academic performance as measured by mean grade, total grade points, and study time. This finding suggests that students whose peers viewed them as emotionally intelligent also tended to demonstrate higher academic performance, indicating that emotional intelligence is related to academic functioning. It should be noted that the authors of the study do not reveal the name of the emotional intelligence measure that was used, so it is unclear whether the test is a valid and reliable assessment of emotional intelligence. This may limit the internal and external validity of this study.

Van Rooy and Viswesvaran (2004) conducted a meta-analysis to evaluate the effect of emotional intelligence on performance. After an examination of 57 unique studies with 69 independent samples, the authors found a correlation of $r = .23$ between emotional intelligence and performance. Specifically, emotional intelligence correlated $r = .22$ with general mental ability. The authors further indicated that emotional intelligence added predictive validity to any performance domain measured in the studies, such as academic ($r = .10$) or workplace ($r = .24$) settings. Other studies have specifically looked at the association between emotional intelligence and workplace performance. Cavallo and Brienza (2004) conducted a study on 300 managers at Johnson & Johnson to assess how superiors, peers, and subordinates would rate their emotional intelligence. Using the ECI (Goleman, 2002), the researchers found that superior performing managers scored high in all four dimensions of the assessment (Self-Awareness, Self-Management, Social Awareness, and Relationship Management). Superiors ranked the

managers highly on 17 of the 20 subscales of the ECI, which suggested that superiors viewed managers as possessing the most emotional intelligence skills, while subordinates assessed managers highly in 14 of the subscales, and peers ranked managers highly in nine of the subscales. Overall, this study offered support that high emotional intelligence is related to work performance.

In another examination of the relationship between emotional intelligence and workplace performance, Rosete and Ciarrochi (2005) assessed a group of 41 executives. Participants were administered the MSCEIT (Salovey, Caruso, & Mayer, 2002) to measure emotional intelligence, the 16 Personality Factor questionnaire (16PF; Con and Rieke, 1998) to measure personality, and the Wechsler Abbreviated Scale of Intelligence (WASI; Wechsler, 1999) to measure cognitive ability. Subordinates and direct superiors were asked to rate the executives' leadership skills. Through regression analyses, the results found that emotional intelligence predicted executives' effectiveness as leaders ($r = .38; p < .05$) and that the perceiving emotions scale of the MSCEIT (Salovey, Caruso, & Mayer, 2002) was the greatest predictor of leadership effectiveness ($\beta = 0.42, p < 0.01$). To explore additional incremental validity of emotional intelligence, the researchers conducted a hierarchical regression, which found that the perceiving emotions scale explained variance not accounted for by IQ and personality ($R^2 \text{ change} = .10; p < .05$).

In another study using the MSCEIT (Mayer, Salovey, & Caruso, 2002), Yale University researchers Lopes et al. (2004) employed a sample of 44 analysts and clerical employees from a Fortune 400 insurance company in the eastern United States. Participants' supervisors and peers rated each individual in interpersonal facilitation, interpersonal sensitivity and sociability, positive and negative interactions, contribution to a positive work environment, and affect and attitudes at work. After controlling for education and trait positive affect, associations between

emotional intelligence and company rank remained significant [$r(40) = .38, p < .05$; $r(40) = .36, p < .05$], respectively. Moreover, this study found that after controlling personality and education, high scores on the MSCEIT (Mayer, Salovey, & Caruso, 2002) predicted pay increases, company ranking, and greater peer and supervisor assessment of interpersonal skills, stress regulation, and leadership skills in analysts and clerical employees. The findings in Rosete and Ciarrochi (2005) and Lopes et al. (2006) suggest that emotional intelligence is an important and unique predictor of workplace performance.

Stone, Parker, and Wood (2005) studied 464 Ontario principals and vice principals utilizing the EQ-i (Bar-On, 1997) and a leadership survey that was completed by the participants' supervisors and three subordinates. The researchers grouped participants into the top 20% and bottom 20% based on the leadership assessments. The findings revealed that high performers scored significantly higher than low performers on total emotional intelligence and all four domains of emotional intelligence (intrapersonal, interpersonal, adaptability, and stress management) as measured by the EQ-i (Bar-On, 1997). In the intrapersonal domain, high performers scored higher than the below average performers on emotional self-awareness and self-actualization. In the interpersonal domain, high performers scored higher than the below average performers in empathy and interpersonal relationships. In the adaptability domain, high performers scored higher than the below average performers in flexibility and problem solving, and in the stress management domain, high performers scored higher than the below average performers and impulse control subscales. Moreover, this section provides a review of studies that have found support for the relationship between emotional intelligence and performance. The current study sought to examine a similar association between emotional intelligence and performance in clinical, counseling, and school psychologists, as emotional intelligence is a

competency that psychologists likely possess. Finally, the next sections discuss empirical findings related to emotional intelligence in psychologists.

Emotional Intelligence in Psychologists

Despite the amount of research that has been dedicated to examining emotional intelligence as a predictor of workplace performance, very limited research has attempted to examine this construct's relation to psychologists. A search of the published literature yielded one study utilizing a sample of counselor educators and two studies that have incorporated the emotional intelligence construct into their study on psychologists. Each of these three studies successfully demonstrated that emotional intelligence is a relevant construct to the field and practice of psychotherapy. These studies are discussed next.

Empirical findings.

Easton, Martin, and Wilson (2008) researched the effects of emotional intelligence on counselor educators' self-efficacy. The study occurred in two phases that were separated by nine months. The sample in phase one was comprised of 66 counselor trainees and 77 practicing counselors from the community; however, only 118 participants from phase one participated in phase two. The phase two sample consisted of 52 counselor trainees and 66 practicing counselors. The study utilized the Counseling Self-Estimate Inventory (COSE; Larson et al., 1992) to assess perceived self-efficacy and the Emotional Judgment Inventory (EJI; Bedwell, 2002) to examine emotional intelligence. For phase one, the study found that high levels of perceived self-efficacy were correlated to high self-appraisal of emotional intelligence. From phase one to phase two, perceived self-efficacy scores increased for counselor trainees more than practicing counselors; albeit, emotional intelligence scores remained stable for both groups at both testing intervals. This finding may be due to the nine-month time interval that was

measured in this study, as nine months may not be sufficient to produce change in emotional intelligence scores. Overall, practicing counselors' perceived self-efficacy and emotional intelligence skills were higher than the counselor trainee group, which supports the theory that immersion into the field and practice of psychotherapy increases emotional intelligence and self-efficacy scores, but that these findings may take longer than nine months for an effect to occur. Moreover, greater differences in experience, such as differences in total hours of supervised clinical experience and years of completed graduate study in a sample of psychology doctoral students may produce differentiated and increased emotional intelligence and self-efficacy scores.

The authors noted that emotional intelligence remained stable in the assessed groups in their study, but contrary to their findings, suggested that emotional intelligence may be developed through training and experience (Easton, Martin, & Wilson, 2008), as recommended by previous researchers (Mayer et al., 1999; Dulewicz & Higgs, 2000; Langley, 2000; Marinez-Pons, 2000; Watkin, 2000). Strengths within this study include its use of the EJI (Bedwell, 2002), which is a self-report measure of emotional intelligence that contains evidence of validity and reliability. However, the use of self-report measures of self-efficacy and emotional intelligence may have resulted in response bias (Easton, Martin, & Wilson, 2008). The authors could have employed additional measures to validate the findings in this study. Further, the sample was recruited from only one counseling program at one university in the United States, so the results may not be generalizable to other counseling programs, as well as different geographic regions. The current research study sought to extend this study by examining emotional intelligence and self-efficacy in a nationwide sample of APA-accredited clinical, counseling, and school psychology doctoral students with different experience in terms of years of completed graduate

study and hours of supervised clinical experience and utilized an ability, or performance, based measure of emotional intelligence, which was suggested by Easton, Martin, and Wilson (2008) and Slaski and Cartwright (2003).

Kaplowitz, Safran, and Muran (2011) studied 23 psychologist-client dyads from a psychiatry medical center in the northeastern United States to assess the effect of psychologists' emotional intelligence on psychotherapy. The study employed the MSCEIT (Salovey, Caruso, & Mayer, 2002) to assess psychologists' emotional intelligence and randomly assigned clients to one of two treatment practices: cognitive-behavioral psychotherapy (CBT; Beck & Freeman, 1998; Turner & Muran, 1992) or brief-relational psychotherapy (BRT; Safran & Muran, 2000). The study's findings demonstrated that there were no group differences between treatment modality, but that psychologists who had higher scores of emotional intelligence also rated the success of their psychotherapy sessions higher ($r = .20$), which suggests higher self-efficacy. Similarly, psychologists who scored higher on branch four (managing emotions) experienced reduced dropout rates ($r = .63, p < .001$) when compared to psychologists with lower scores on the same scale. The study also found that higher emotional intelligence scores were related to greater client compliance rates ($r = -0.59, p = .003$). This study establishes preliminary support for the value of emotional intelligence in helping professions and in the process of psychotherapy. Additionally, the use of the MSCEIT (Salovey, Caruso, & Mayer, 2002) to examine the predictor variable of emotional intelligence in this study is noteworthy as this measure assesses emotional intelligence performance.

Rieck and Callahan (2013) conducted a study on 32 psychology doctoral trainees and 133 of their clients to assess whether emotional intelligence is a prerequisite competency for psychology doctoral students to be successful. Previous research has suggested that narratives of

psychology doctoral students who are considered incompetent may have inappropriately low emotional intelligence scores (Elman & Forrest, 2004; Forrest, Shen-Miller, & Elman, 2008), which indicates they lack “baseline” capabilities to perform the work of a psychologist. Using psychology doctoral students in their sample, the authors examined the relationship between personality and client outcomes, as moderated by emotional intelligence, in order to explore doctoral psychology students’ training and development. To investigate differences in emotional intelligence development, 13 of the trainees were grouped as “early trainees” (in their first or second year of the doctoral program) and 19 were “established trainees” (third year or beyond in the doctoral program). The authors employed the MSCEIT (Mayer, Salovey, & Caruso, 2002) to measure emotional intelligence, the NEO-Personality Inventory-Revised (NEO-PI-R; Costa & McCrae, 1992) to measure personality, and the Outcome Questionnaire-45.2 (OQ-45.2; Lambert et al., 1996) to measure client outcomes.

Findings suggested that meaningful client change occurred when trainees scored high on emotional intelligence ($r = .40$; $p = .01$) and when trainees also scored high on the Neuroticism scale of the NEO ($R^2 = .05$). Additionally, emotional intelligence scores of doctoral trainees’ were in the “high-average” (100-109) to “competent” (110-119) range, suggesting that individuals who aspire to become psychologists are sufficiently emotionally intelligent. While this study did not find significant differences between early and established trainees on the measure of emotional intelligence, this was the first study that has attempted to examine emotional intelligence in a sample of psychology doctoral students. Limitations within this study include its use of a convenience sample, as participants were comprised of doctoral students from only one university. Similarly, the authors’ operational definition of early and established

trainees may not have been sufficient to measure an effect between groups, which could explain why significant differences were not found.

More specifically, since second year students were included as “early trainees,” and third year and beyond were considered “established trainees,” it is possible that second and third year students were relatively similar in emotional intelligence, which may explain non-significant differences between groups. Future studies should attempt to measure variables that differentiate participants, such as by examining participants’ total number of supervision and clinical experience hours and years of completed graduate study. These suggested variables would conceivably produce significant differences in emotional intelligence, with more advanced students displaying higher scores. Finally, it is foreseeable that the practicing clinical, counseling, or school psychologist who performs psychotherapy would possess emotional intelligence, which is further explored in the next section.

Components of Psychotherapy Requiring Emotional Intelligence

Psychologists who conduct psychotherapy should possess considerable ability in establishing interpersonal relationships, as well as employing affective skills, including detection and understanding of others’ feelings (which is related to the perceiving, integrating, and understanding emotions branches) and expressive skills, such as clear verbal and nonverbal communication. While differing variables have been associated with psychotherapy performance outcomes in the literature, qualities of the psychologist have often been overlooked (Beutler, 1997; Hersoug et al., 2009; Kaplowitz, Safran, & Muran, 2011; Vocisano et al., 2004; Wampold, 2001). Through meta-analytic review, research has revealed that a psychologist’s competence is more important than treatment type in determining treatment outcomes (Elkin, Falconnier, Martinovich, & Mahoney, 2006; Crits-Christoph & Mintz, 1990; Wampold, 2001),

which suggests the need for research to examine these variables more closely. Previous research in this area has mostly focused on correlating only demographic information such as gender and ethnicity (Vocisano et al., 2004) with client outcomes. More recently, the literature has suggested that researchers should examine relational competencies of psychologists as predictors of therapeutic growth (Safran & Muran, 2000; Skovholt & Jennings, 2004), such as by including the construct of emotional intelligence in studies (Kaplowitz, Safran, & Muran, 2011), which was the premise for the current study.

After examining the CER theory of master psychologists (Skovholt & Jennings, 1999) and the construct of emotional intelligence, both the emotional and relational domains of the CER theory appear to be consistent with emotional intelligence, and all of these constructs are associated with the practice of psychotherapy. For example, the emotional domain of the CER theory emphasizes that master psychologists exude empathy (Greenberg et al., 2001; Skovholt & Jennings, 1999; Lambert & Barley, 2001; Orlinsky & Howard, 1986), which is the capacity to recognize and understand their own and others' thoughts, emotions, and needs. This is directly related to perceiving emotions, or branch one, of the ability-based model of emotional intelligence (Mayer & Salovey, 1997), but also requires skill in integrating emotions and understanding emotions (branches two and three, respectively). When conducting psychotherapy, psychologists should be able to perceive and attend to client emotions, as well as understand the emotions they themselves are experiencing, particularly when facing countertransference reactions to a client's statements or behaviors. Furthermore, psychologists must be able to constructively manage countertransference reactions, which requires competency in the fourth branch, or managing emotions domain, of emotional intelligence, as well as both the emotional and relational domains of the CER theory. Competency in these areas also assists

psychologists in detecting and managing client defensiveness and incongruence, as well as difficult emotions (Dalenberg, 2004; Hill et al., 2003; Kaplowitz, Safran, & Muran, 2011), which can otherwise interfere with the therapeutic process.

In the beginning of psychotherapy, the psychologist must utilize their emotional and relational skills to establish rapport with the client. For instance, at the onset of psychotherapy, psychologists should possess the ability to allow clients to feel relaxed so they are comfortable and want to return for another session. Similarly, psychologists must consistently work on developing and maintaining the therapeutic alliance with clients, which is an important variable in client growth and can predict the overall outcome of psychotherapy (Bordin, 1979; Gullo, Lo Coco, & Gelso, 2012; Horvath & Bedi, 2002; Lambert & Barley, 2001). The capacity to develop a strong therapeutic alliance is associated with the relational domain of the CER theory, and requires all four branches of emotional intelligence, which includes perceiving emotions, integrating emotions, understanding emotions, and managing emotions. Psychologists must be able to successfully perform in each of these areas in order to demonstrate to the client that they are competent, caring, flexible, interested, understanding, and responsive (Hersoug et al., 2009; Novotney, 2013), which are important factors in developing the therapeutic alliance.

Moreover, this section reviewed the relationship between psychotherapy, emotional intelligence, and the CER theory (Skovholt & Jennings, 1999), as well as provided information on the psychotherapy factors that are related to and influenced by CER theory and emotional intelligence. Based on the relative importance of emotional and relational competencies in psychotherapy, which can be measured through the construct of emotional intelligence, it is conceivable that the American Psychological Association (APA) would also suggest that these

competencies should be assessed in clinical, counseling, and school psychology doctoral students, which is addressed next.

Emotional Intelligence and APA Benchmarks

The American Psychological Association (APA) maintains a set of competency benchmarks and corresponding evaluations that assist graduate psychology programs in assessing student learning and program outcomes. Program faculty can utilize evaluation forms to assess the development and readiness of doctoral students for practicum, internship, and to enter professional practice. APA's benchmarks workgroup developed a specific form that focuses on relationship competencies (Kaslow et al., 2009), and which supports the need for relational, or emotional intelligence abilities in the practice of psychology. The Interpersonal Professional Relationships Competency Rating Form (APA, 2012) examines one's capacity to establish, improve, and sustain efficient interpersonal relationships with clients, supervisors, supervisees, faculty, colleagues, groups, and other allied professionals. Specifically, some relevant core competencies include the assessment of interpersonal relationships, affective skills, and expressive skills, which are comprised of empathy, compassion, the desire to be helpful, as well as experience and use of affect. These competencies are directly associated with emotional intelligence. The current study, which sought to examine the development of emotional intelligence in clinical, counseling, and school psychology doctoral students, provides additional data that can help doctoral psychology programs determine if they are meeting the benchmarks set forth by APA. In addition to emotional intelligence, self-efficacy appears to be an important factor in psychologist competency development, as this construct refers to an individual's belief about their ability to perform, which may affect one's performance-based emotional intelligence.

The effect of academic experiences in a psychology doctoral program on emotional intelligence may vary depending on self-efficacy. Further, by examining the hypothesized development of emotional intelligence between students in different stages of a clinical, counseling, or school psychology doctoral program, as mediated by self-efficacy, doctoral programs in clinical, counseling, and school psychology can identify areas for maintenance or improvement, such as course curriculum, practicum experiences, seminars, trainings, supervision opportunities, and assessing student self-efficacy. The following sections discuss self-efficacy and related variables in greater detail.

Self-Efficacy

Self-efficacy theory, proposed by Bandura (1977), is a person's belief in his or her own capacity and aptitude to engage in goal-oriented behaviors. Self-efficacy is an extension of social-cognitive theory (SCT), which is a model that addresses how individuals learn by observing others around them. Additionally, self-efficacy influences how a person thinks and feels and subsequently, how they approach situations (Cetinkalp & Turksoy, 2011; Dinc, 2011). The literature on self-efficacy suggests that there is a direct relationship between self-efficacy, high levels of performance, and overall goal attainment (Bandura, 1982). It should also be noted that the literature proposes that self-efficacy is domain-specific, which means that an individual could possess high levels of self-efficacy in one area and low levels of self-efficacy in another area (Ferrell-Swann, 1999). In the current study, it is possible that participants displayed either high general self-efficacy or psychotherapy-specific self-efficacy, but not both. Above all, self-efficacy does not appear to be a static concept, but instead a logical hypothesis is that it can be increased through vicarious learning and acquired experience. Furthermore, Bandura (2000) indicated that self-efficacy affects how people think, how they go about pursuing a goal, what

goals they establish, their dedication to the pursuit of their goals, the amount of energy they expend, their expectations, their ability to persist during challenges, resiliency, their mental health, and the achievements they accomplish.

Empirical findings.

Based on these proposed effects of self-efficacy, a logical assumption is that master psychologists are more likely to possess greater general self-efficacy and psychotherapy-specific self-efficacy. This hypothesis has been supported in the literature and the typical finding is that more experienced psychotherapists self-report greater self-efficacy than those with less experience (Larson & Daniels, 1998), though previous research has not measured both general self-efficacy and psychotherapy-specific self-efficacy in the same study. Additionally, limited research has been conducted examining self-efficacy in psychologists, whereas a significant amount of previous research in this area has utilized a sample of counselor educators. The following four studies are relevant to the current discussion on self-efficacy.

Friedlander and Snyder (1983) examined psychotherapy-specific self-efficacy within the supervisor-supervisee relationship. The researchers were interested in examining how trainees approached the supervision experience and how this would have an effect on their training and self-efficacy. The study included 82 participants, which were comprised of 29 beginning master's level students, 31 advanced doctoral students, and 22 doctoral interns. The study found that students with higher self-efficacy had greater expectations of their supervisor's competencies dependent on their supervisor's amount of experience, but that trainees' experience level was not significant. The study concluded that individual differences might be more important than experience in determining self-efficacy.

A study conducted by Johnson, Baker, Kopala, Kiselica, and Thompson (1989)

investigated self-efficacy in graduate counseling classes. At the beginning of the semester, the researchers utilized the Counselor Self Efficacy Scale (CSES; Johnson, Baker, Kopala, Kiselica, & Thompson, 1989) to place students in one of two groups: the high efficacy group and low efficacy group, and then randomly assigned students in both groups to receive counseling for eight weeks. The researchers believed that those students receiving counseling would demonstrate improvement in their psychotherapy-specific self-efficacy and that psychotherapy-specific self-efficacy would increase for all students over the eight-week training period. The study found that students' self-efficacy ratings increased throughout the training period and that there were relevant differences between the high and low self-efficacy groups. This study offers support for the theory that self-efficacy can be increased through learning and varied experiences.

Ferrell-Swan (1999) conducted a study on 25 expert, 21 experienced, and 27 novice psychologists to examine hypothesis formation skills, general self-efficacy, self-esteem, problem-solving appraisal, and empathy. The researchers defined expert psychologists as those who were licensed psychologists and held either American Board of Professional Psychology (ABPP) status or who were Fellows in Division 12 of the American Psychological Association (Clinical Psychology). Experienced psychologists were individuals who were licensed psychologists working at different sites; novices were psychologist-trainees' who were recruited from psychology training programs. In terms of self-efficacy, which was examined using the Self-Efficacy Inventory (SE-I; Friedlander & Snyder, 1983), the researchers found that the experienced group and expert group reported significantly higher levels of general self-efficacy than the novice psychologists, which provides support for the hypothesized differences in general self-efficacy between students in different stages of a psychology doctoral program in

the present study. Interestingly, the experienced psychologists and expert psychologists were similar in their general self-efficacy ratings. Non-significant differences between the experienced and expert groups may be explained by a possible ceiling effect contained in the SE-I (Friedlander & Snyder, 1983) instrument. Based on this, future researchers should conduct pilot studies to examine limitations of instruments.

Using Friedlander and Snyder's (1983) Self-Efficacy Inventory (SE-I), Mei Tang et al. (2004) assessed 116 counseling students from six counselor education programs (three CACREP [Council for Accreditation of Counseling and Related Educational Programs] accredited and three non-CACREP accredited) in the Midwest United States to examine whether general self-efficacy increased over time. The variables included in the study were age, previous work experiences, number of previous academic courses, and amount of acquired internship hours. Using a two-group MANOVA, the researchers found that general self-efficacy was related to total academic coursework ($r = .59, p < .01$), accumulated internship hours ($r = .47, p < .01$), and total clinical coursework ($r = .40, p < .01$). This study provides preliminary support for the relationship between increased academic and clinical experiences and high general self-efficacy, which is likely to be similar in a sample of psychology doctoral students. Further, the study did not find significant differences in self-efficacy between the CACREP and non-CACREP groups, $F(20, 74) = .90, p < .59$. The inclusion of three CACREP and three non-CAPCREP programs was a notable strength in this study. Future studies should attempt to extend the sample employed in this study by utilizing a nationwide pool of participants, as well as utilizing a measure of self-efficacy that assesses skills specific to psychotherapy, such as the counseling self-efficacy measure that was employed in the present study.

Furthermore, most individuals who are master psychologists would likely rank themselves as efficacious. Research has demonstrated that self-efficacy might be predicted by individual differences more than experience (Friedlander & Snyder, 1983), whereas other studies have indicated that self-efficacy might be a malleable construct that can increase over time and with experience (Ferrell-Swan, 1999; Johnson, Baker, Kopala, Kiselica, & Thompson, 1989). While few studies have examined self-efficacy in association with psychologists, the study described above is the only study that has examined self-efficacy between counselor educators at different experience levels, which was a goal of the current study with a sample of clinical, counseling, and school psychology doctoral students. Finally, the impact of self-efficacy on emotional intelligence is discussed in more detail in the following section.

The Impact of Self-Efficacy on Emotional Intelligence

Bandura's (1982) view of self-efficacy, which contends that this construct can predict mastery in a domain, is important to consider when examining the impact of emotional intelligence on psychotherapy. Petrides and Furnham (2003) referred to the mixed model of emotional intelligence as emotional self-efficacy since the model measures one's beliefs about their ability to perform. Based on these ideas, it is conceivable that psychologists who possess high self-efficacy would also self-report high emotional intelligence on mixed model questionnaires of emotional intelligence, as evidenced in Easton, Martin, and Wilson (2008). However, this is the only study that has attempted to examine the relationship between these variables and this study focused on a sample of counselor education students.

In terms of the ability model, research has not investigated the effect of self-efficacy on performance measures of emotional intelligence. Both general self-efficacy and psychotherapy-specific self-efficacy are conceivably developed through acquired experiences and would likely

effect one's performance on an assessed measure of emotional intelligence. It is important to examine the mediating effect that general self-efficacy and psychotherapy-specific self-efficacy has on one's performance-based emotional intelligence and it would be worthwhile to explore these variables in a sample of professional psychology doctoral students. To be competent at conducting psychotherapy, it is reasonable to assume that master psychologists would exhibit high self-efficacy. The next section addresses the relationship between self-efficacy and psychotherapy.

Self-Efficacy and Psychotherapy

In the realm of psychotherapy, self-efficacy influences how psychologists approach their work, clients, and work-related challenges. Kirk, Schutte, and Hine (2011) and Larson (1998) both report that self-efficacy affects cognitions, affect, behavior, and motivation, especially when a psychologist is engaging in psychotherapy. Further, high self-efficacy is related to job satisfaction (Judge & Bono, 2001; Larson & Daniels, 1998) and overall work performance (Judge & Bono, 2001), which means that self-efficacy likely influences psychologists' performance. When psychologists can identify their competencies and feel confident about the quality of their psychotherapy services, they are likely to be more efficacious with clients (Bradley & Fiorini, 1999), which is referred to as psychotherapy-specific self-efficacy. Previous studies have found that psychologists who possess high self-efficacy are likely to be more confident and functional in their work with clients (Kirk, Schutte, & Hine, 2011; Mei Tang et al., 2004), such as when using confrontation in psychotherapy sessions. Finally, psychologists with high psychotherapy-specific self-efficacy are more likely to persist through adversity and be successful mastering new, psychotherapy behaviors (Kirk, Schutte, & Hine, 2011).

Both general self-efficacy and psychotherapy-specific self-efficacy have been reported to develop in settings where individuals are able to utilize their critical thinking skills (Kaczmarek, Barclay, & Smith, 1996; Nelson & Neufeldt, 1998; Spruill & Benschhoff, 2000), such as in academic programs, supervision, trainings, or through clinical experiences. A study by Melchart, Hays, Wiljanen, and Kolocek (1996) reported that counselor education students' year of training and amount of clinical experience were related to their counseling self-efficacy. Based on these reported findings, it appears evident that both general self-efficacy and psychotherapy-specific self-efficacy are important mediating variables in mastering psychotherapy and that both types of self-efficacy may be increased through the accumulation of experiences while in a clinical, counseling, or school psychology doctoral program. Similarly, both general self-efficacy and psychotherapy-specific self-efficacy may mediate the relationship between academic experiences and ability model emotional intelligence. In the present study, it was expected that increased academic experiences would predict higher levels of both general self-efficacy and psychotherapy-specific self-efficacy, which may have resulted in higher performance-based emotional intelligence scores.

Critical Analysis and Gaps in the Literature

The factors that predict performance within psychotherapy are diverse. Several researchers have developed theories that attempt to explain psychologist competency development and performance. These theories have examined the development of psychologists from their initial interest in the field to the stage where interest has manifested to career-directed focus (Bloom, 1985), the importance of decision-making skills and perceptual abilities that occur as a person gains experience and practice in a specific domain (Dreyfus & Dreyfus, 1986; Schmidt, Norman, & Boshuizen, 1990), the utilization of reflection in clinical practice (Shön,

1983), and the importance of cognitive, emotional, and relational competencies (Skovholt & Jennings, 1999). Furthermore, Skovholt and Jennings' (1999) CER theory is considered the first theory that attempts to comprehensively explain necessary competencies of a master psychologist. From a broader analysis, these theories collectively assert that career-direction, decision-making skills, critical analysis, consistent reflection, passion, open-mindedness, empathy, and social skills are all necessary qualities of a master psychologist, and many of these assets are consistent with emotional intelligence. Finally, the construct of emotional intelligence appears to reflect the emotional and relational domains of the CER theory.

Previous literature has provided support for emotional intelligence as a valid and reliable construct. While there are many variables that predict performance in clinical, counseling, and school psychologists, emotional intelligence appears to represent a critical factor, as the ability to perceive, understand, facilitate, and manage emotions are an inherent aspect of a psychologist's work. Yet much less focus has been directed to the relationship between emotional intelligence and performance in the psychology field. A review of the literature yields only two studies that have included emotional intelligence as a variable when examining psychologists. These studies found support for the positive effect that high scores in this domain have on psychotherapy outcomes. While other degree programs, such as engineering, nursing, and medicine have examined changes in emotional intelligence in their students, only one of the two studies employing a sample of psychologists has attempted to examine whether education and experience increases emotional intelligence in psychology doctoral students. However, results were not significant, though this may be due to limitations that were contained in the design of the study, such as poor operational definitions of groups. Future studies should determine

adequate intervals to measure change, such as by examining students who have differentiated hours of supervised clinical experiences and years of completed graduate study.

Relatedly, emotional intelligence is hypothesized to develop through instruction (Dulewicz & Higgs, 2000; Mayer et al., 2002; Nelis, Quoidbach, Mikolajczak, & Hansenne, 2009; Slaski & Cartwright 2003; Satterfield & Hughes 2007; Todres, Tsimtsiou, Stephenson, & Jones, 2010; Ulutas & Omeroglu 2007; Watkin, 2000), and with age and experience (Bar-On, 1997; Day & Carroll, 2004; Mayer, Caruso, et al., 1999; Todres, Tsimtsiou, Stephenson, & Jones, 2010; Van Rooy, Alonso, & Viswesvaran, 2005b). Mayer et al. (2002) and Rieck and Callahan (2013) also suggested that emotional intelligence is a generally static ability, but that it likely increases through personal development and experiences. These previous findings support the use of the ability model to examine changes in emotional intelligence. In the present study, accumulation of experiences, such as number of clinical hours, number of supervision hours, and number of years of completed graduate study were hypothesized to increase emotional intelligence. Additionally, general self-efficacy and psychotherapy-specific self-efficacy were hypothesized as having a mediating effect. While academic experiences may lead to increased ability-model (performance-based) emotional intelligence, it was hypothesized that academic experiences increase both general self-efficacy and psychotherapy-specific self-efficacy, which may lead to higher performance on an performance-based measure of emotional intelligence. Previously, only one study has examined self-efficacy as a moderator of accumulated experience and emotional intelligence, while no studies have examined either general self-efficacy or psychotherapy-specific self-efficacy as mediators of accumulated experience and emotional intelligence. While results were significant in the moderator analysis, the study included a sample of counselor education masters students whereas the present study assessed clinical,

counseling, and school psychology doctoral students and included both general self-efficacy and psychotherapy-specific self-efficacy as mediator variables.

Several studies have demonstrated a link between emotional intelligence and performance (Bharti & Sidana, 2012; Cherniss, Extein, Goleman, & Weissberg, 2006; Lopes et al., 2004). The corporate world has regularly supported emotional intelligence as a significant predictor of performance, yet health professions have conducted very limited research on this topic, despite the view that a significant relationship likely exists (Romanelli, Cain, & Smith, 2006). Relatedly, APA (2012) included emotional competencies in their benchmarks that are used to assess student learning and program outcomes in professional psychology doctoral programs. These competencies support the fundamental principles of emotional intelligence. Furthermore, the inclusion of emotional proficiencies in APA's suggested evaluation of psychology doctoral students indicates the need for these competencies to be more closely assessed in clinical, counseling, and school psychology doctoral programs.

While significant differences were not found across years for total emotional intelligence scores in Todres, Tsimtsiou, Stephenson, and Jones' (2010) study on emotional intelligence in medical students, final year students demonstrated significant improvement in branch four (managing emotions), suggesting that this higher-order emotional intelligence competency increases as one progresses through a rigorous academic program. It was assumed that results would be similar in professional psychology doctoral students who were immersed in challenging academic and clinical training programs. In order to examine whether significant differences in emotional intelligence can be observed in different academic groups, it was important to conduct a similar study with a sample of psychology doctoral students.

Additionally, in order to evaluate whether emotional intelligence increases through immersion in a clinical, counseling, or school psychology doctoral program, it was important to acquire a sample that included participants with different total hours of supervised clinical experience and years of completed graduate study. Romanelli, Cain, and Smith (2006) suggested that future research on emotional intelligence should examine academic markers, such as by conducting a comparison of students in different phases of a program. In order to assess a more inclusive sample, and to increase generalizability and representativeness, this study solicited participation from 87 psychology doctoral students in APA-accredited clinical, counseling, and school psychology programs across the United States.

The study addressed the emotional and relational domains of Skovholt and Jennings' (1999) CER theory of master psychologist development. By assessing the emotional and relational domains of the CER theory, the study provided support for the model and sought to build and extend extant theory regarding the development of master psychologists. In order to assess the emotional and relational domains, the construct of emotional intelligence was utilized. In terms of measuring emotional intelligence, a significant portion of the literature favors the ability model for its evidence of validity and reliability. The MSCEIT (Mayer, Salovey, & Caruso, 2002), which is an ability-based measure of emotional intelligence, has been widely supported in the literature as the preferred measure of emotional intelligence due to its acceptable to excellent validity and reliability (Spector, 2005; Stratton, Saunders, & Elam 2008) and its performance-based method of assessing one's tangible capacity to identify, understand, and employ emotional information provide. For these reasons, the MSCEIT was used as the criterion variable in the current study as it yields a better estimate of emotional intelligence than self-report questionnaires, which follow the mixed model. Further, this study assessed whether

completed years of graduate study and supervised clinical experience hours predicted performance-based emotional intelligence (ability model) in clinical, counseling, and school psychology doctoral students.

Studies have also suggested that self-efficacy leads to greater outcomes for psychologists, such as increased confidence and effectiveness with clients (Kirk, Schutte, & Hine, 2011; Mei Tang et al., 2004). Self-efficacy is most closely associated with the mixed model of emotional intelligence that is sometimes referred to as emotional self-efficacy. It is conceivable that increased academic experiences lead to higher general self-efficacy and psychotherapy-specific self-efficacy and that higher general self-efficacy and psychotherapy-specific self-efficacy predict higher emotional self-efficacy (i.e., emotional intelligence), which can be measured by a performance-based assessment of emotional intelligence. Therefore, general self-efficacy and psychotherapy-specific self-efficacy were included as mediator variables when examining the effect of academic experiences (total years of graduate study and total hours of supervised clinical experience) on performance-based emotional intelligence.

In summary, a review of the literature yielded minimal studies examining the association between emotional intelligence and performance in psychotherapy, one study examining self-efficacy and emotional intelligence in a sample of counselor educators, and one study that assessed the impact of immersion into a psychology doctoral program on emotional intelligence. Thorough examination of the current literature on emotional intelligence, performance, self-efficacy, and psychologists revealed that many of the studies are not current, as 96 of the reviewed studies were conducted at least 10 years ago. It was valuable for current research to be conducted that examined the development of emotional intelligence in psychology doctoral students. Finally, several of the studies on emotional intelligence have been conducted in places

such as India, the United Kingdom, Italy, China, and Canada, which limits the ability to generalize findings to other parts of the world, such as the United States. As such, it was worthwhile to examine emotional intelligence and self-efficacy in a sample of United States participants.

Due to the aforementioned gaps in the literature, these areas of research were valuable to explore in the current study. Moreover, the current study hoped to address whether immersion into the psychology field through clinical, counseling, or school psychology doctoral graduate program curricula increased emotional intelligence and whether general self-efficacy and psychotherapy-specific self-efficacy mediated the relationship between academic experiences and emotional intelligence, which were notable gaps in the literature. The present study extended Easton, Martin, and Wilson's (2008) study on counselor educators by utilizing a sample of 87 clinical, counseling, and school psychology doctoral students, an ability-based measure of emotional intelligence, and employing a nationwide sample that is representative. Furthermore, the study addressed methodological issues identified in the previous literature, such as inadequate sample sizes, inclusion of measures containing insufficient reliability and validity, poor operational definitions of variables, employing a sample of convenience, and lack of comparison groups. Consequently, more psychometrically rigorous measures, a representative sample of 87 participants, and a sample with sufficient power were utilized. Finally, multiple regression and bootstrapping analyses were employed. Further, the following research questions were examined:

- 1) What is the strength of the relationship of academic experience, as measured by total years of graduate study and total hours of supervised clinical experiences, to psychology doctoral students' performance-based emotional intelligence?

2) Do general self-efficacy and psychotherapy-specific self-efficacy mediate the relationship between psychology doctoral students' academic experiences and performance-based emotional intelligence?

CHAPTER THREE

METHODOLOGY

Chapter one and two provided a theoretical foundation for examining the importance of emotional intelligence in psychologists. The present chapter examines the specific hypotheses that were employed in the current study and that were developed from the research questions, discusses variables of interest, and defines the instruments that were used in the study. Likewise, the population of interest, research design, and statistical analyses that were used for interpreting data are presented.

Research Questions and Hypotheses

Based on the empirical findings of previously conducted research, two research questions and three hypotheses were examined:

1. What is the strength of the relationship of academic experience, as measured by total years of graduate study and total hours of supervised clinical experiences, to psychology doctoral students' performance-based emotional intelligence?

H1: Professional psychology doctoral students with a greater number of academic experiences, including years of graduate study and total supervised clinical experiences, will score higher on a measure of performance-based emotional intelligence.

2. Do general self-efficacy and psychotherapy-specific self-efficacy mediate the relationship between psychology doctoral students' academic experiences and performance-based emotional intelligence?

H2: The effect of academic experiences on emotional intelligence is partially mediated by general self-efficacy.²

H3: The effect of academic experiences on emotional intelligence is partially mediated by psychotherapy-specific self-efficacy.

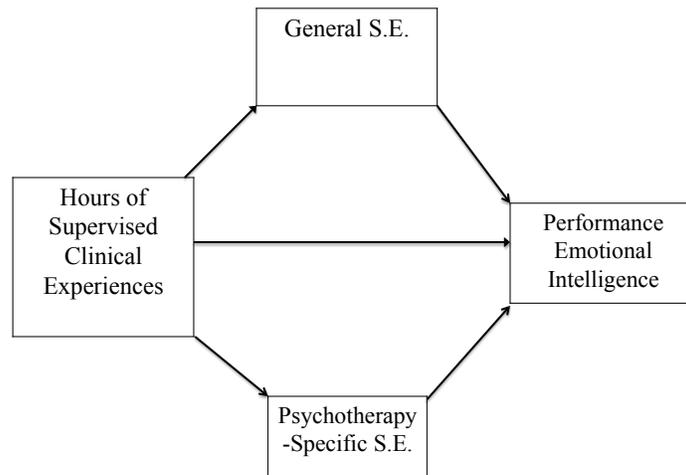


Figure 2. Visual representation of proposed mediator model.

Recruitment Procedure

The current research study was conducted with prior authorization from the Institutional Review Board of Florida State University (see Appendix A). To be eligible to participate in this study, participants had to be in an APA-accredited clinical, counseling, or school psychology doctoral program.

Participants

A priori power analyses were conducted using R Project Statistical Computing Version 3.0.2 (R Core Team, 2013) software to determine the number of participants needed to conduct quantitative mediation analyses congruent with the research hypotheses. Based on an alpha level set to 0.05, theta set to .3, lambda set to .3, sigma of x (standard deviation of the predictors) set to 1, sigma of m (standard deviation of the mediators) set to 1, the square of the correlation between

the predictors and mediators set to .25, and sigma epsilon (the standard deviation of the random error term linking the predictors and the mediators to the outcome) set to .25, the results indicated that the sample size required for the current study was 73 participants.

The study’s sample was comprised of clinical, counseling, and school psychology doctoral students, as it was hypothesized that a relationship would exist between emotional intelligence and self-efficacy in these types of psychologists due to their focus on psychotherapy. Students enrolled in other psychology doctoral programs, such as I/O psychology, social psychology, developmental psychology, or experimental psychology were not included, as these programs were not the focus of the study and research did not appear to support the potential for a significant relationship to exist among these groups and the aforementioned variables. A national sample of clinical, counseling, and school psychology doctoral students was solicited through the American Psychological Association’s list of accredited doctoral programs. A total of 87 completed surveys were obtained. Finally, participation was voluntary, though participants were informed they would be entered into a random drawing for one of four \$10 Starbucks gift cards if they completed the study.

Table 1 *Sample Characteristics with Frequencies and Percentages*

Variable	Frequency = N	Percent %
<u>Gender</u>		
Male	15	17.2
Female	72	82.8
<u>Ethnicity</u>		
Caucasian	70	80.5
Hispanic	3	3.4
African American	6	6.9
Biracial	4	4.6
Asian	2	2.3
Indian	1	1.1
Other	1	1.1
<u>Age</u>		
23	7	8
24	7	8

Table 1 Continued

Variable	Frequency = N	Percent %
<u>Age</u>		
25	10	11.5
26	9	10.3
27	12	13.8
28	6	6.9
29	11	12.6
30	8	9.2
31	5	5.7
32	2	2.3
33	1	1.1
34	4	4.6
38	1	1.1
41	1	1.1
42	1	1.1
43	1	1.1
45	1	1.1
<u>Type of Doc Program</u>		
Clinical	49	56.3
Counseling	18	20.7
School	11	12.6
Combined	9	10.3
<u>Participants with Masters</u>		
<u>Degree</u>		
Clinical Psychology	33	37.9
Counseling Psych	16	18.4
Rehabilitation	1	1.1
Non-clinical psych	14	16.1
Other masters	3	3.4
No masters	20	23
<u>Hours of Clinical Exp.</u>	Mean = 771.46	Standard Deviation = 909.21
<u>Hours of Supervision</u>	Mean = 217.18	Standard Deviation = 184.17

Table 1 provides demographic information on the study's sample. The mean age was 28.3 years (range = 23 - 45, *SD* = 4.48) and 82.8% were female. Race/ethnic identity was reported as Caucasian (80.5%), Hispanic (3.4%), African American (6.9%), Biracial (4.6%), Asian (2.3%), Indian (1.1%), and Other (1.1%). Participants included clinical (56.3%), counseling (20.7%), school (12.6%), and combined (10.3%) professional psychology doctoral programs. While the sample was comprised of participants without prior graduate education (23%), some participants previously obtained a masters degree, and the sample included

participants with masters in clinical psychology (37.9%), counseling psychology (18.4%), rehabilitation (1.1%), non-clinical psychology (16.1%), and 'other' masters (3.4%).

Research Design and Variables

The present study employed a quasi-experimental, cross-sectional, causal-correlational design that included two predictors: (1) total years of graduate study completed and (2) an aggregate variable of total supervised clinical experiences, which consisted of total practicum, internship, and supervision hours completed. The one continuous criterion variable was ability-model emotional intelligence, which was operationalized using total scores on the Mayer-Salovey-Caruso Emotional Intelligence Test (MCSEIT; Mayer, Salovey, & Caruso, 2002). The third and fourth predictor variables, general self-efficacy and psychotherapy-specific self-efficacy, were included as mediator variables and were measured utilizing the General Self-Efficacy Scale (GSE; Schwarzer & Jerusalem, 1995) and Counselor Activities Self-Efficacy Scale (Lent, Brown, & Hill, 2003).

Instrumentation

The Mayer-Salovey-Caruso Emotional Intelligence Test (MCSEIT; Mayer, Salovey, & Caruso, 2002), the General Self-Efficacy Scale (GSE; Schwarzer & Jerusalem, 1995), and the Counselor Activities Self-Efficacy Scale (CASES; Lent, Hill, & Hoffman, 2003) represent the measures included in the present study. Additionally, a demographic form was utilized to collect and provide descriptive data. These measures were tested in a pilot study and results suggested that the measures were appropriate for the intended population since participants did not report difficulties with responding to the measures and the MSCEIT measure contained a high enough ceiling to measure emotional intelligence in psychology doctoral students. The following section provides an overview of each measure and specifically addresses the purpose, content, reliability,

and validity. Finally, included assessments were selected because they corresponded with the theoretical foundations described above.

Demographic form.

A demographic form (see Appendix D) was used to collect demographic information and related characteristics on participants' gender, ethnicity, age, type of academic program, years of graduate study completed, and number of practicum, internship, and supervision hours completed.

Mayer-Salovey-Caruso Emotional Intelligence Test (MCSEIT).

The Mayer-Salovey-Caruso Emotional Intelligence Test (MCSEIT; Mayer, Salovey, & Caruso, 2002) is a 141-item ability-based measure of emotional intelligence that contains four subscales: perceiving emotions, facilitating thought, understanding emotions, and managing emotions. The test yields subscale scores for the four subscales, or branches, of emotional intelligence, which aggregately yields an overall index score of emotional intelligence. The test was constructed to reflect total scores equivalent to standard IQ tests with a mean of 100 and *SD* of 15. The MSCEIT (Mayer, Salovey, & Caruso, 2002) can be administered to individuals' age 17 and older, and is often completed in 30-45 minutes. The four branches of emotional intelligence, which are represented on the MSCEIT (Mayer, Salovey, & Caruso, 2002) as subscales, are defined next.

As proposed by Mayer, Salovey, and Caruso (2002), the perceiving emotions subscale examines ones ability to perceive emotions in the self, others, and in items, art, stories, song, and other stimuli. The facilitating thought subscale assesses ones ability to produce, utilize, and feel emotion in order to communicate feelings or implement feelings in other cognitive events. The understanding emotions subscale assesses ones ability to comprehend emotional information,

comprehend how emotions unite and progress through relationship evolutions, and to value such emotional connotations. The managing emotions subscale assesses ones ability to remain open to feelings and to moderate them in oneself and others in order to support personal understanding and development.

Instrument norms are based on sample of 2,112 adults aged 18 or older. The creators of the MSCEIT, Mayer, Salovey, and Caruso (2002), found that the MSCEIT's full-scale reliability is $\alpha = .93$ and that branch-score reliabilities range from $\alpha = .79$ to $.90$. These values suggest that the MSCEIT (Mayer, Salovey, & Caruso, 2002) maintains acceptable to excellent internal consistency. Additionally, test-retest reliability over a two-week period was $r = .86$, which indicates that MSCEIT maintains stability. This finding of test-retest reliability, $r = .86$, has also been supported in the literature (Brackett & Mayer, 2001). In terms of validity, factor analysis supported one factor, two factor, and four factor models that are representative of emotional intelligence, but indicated that the four branch model fits the data in markedly superior manner to other models. For the purpose of this study, total scores on the MSCEIT measure were used to analyze results for the primary research questions and the four-branch model was subsequently tested in additional data analyses. Finally, the MSCEIT (Mayer, Salovey, & Caruso, 2002) shows evidence of acceptable psychometric properties. In the pilot study conducted for this dissertation, the MSCEIT (Mayer, Salovey, & Caruso, 2002) did not produce a ceiling effect with individuals engaged in helping professions. According to Spector (2005), the MSCEIT is the most preferred measure of emotional intelligence due its acceptable validity and similarly, Stratton, Saunders, and Elam (2008) suggested that future studies examining emotional intelligence should utilize the MSCEIT (Mayer, Salovey, & Caruso, 2002) as its ability-based

method of assessment may assist in determining whether cross-sectional changes in emotional intelligence are valid or artificial.

General Self-Efficacy Scale (GSE).

The General Self-Efficacy Scale (GSE; Schwarzer & Jerusalem, 1995) is a 10-item measure that assesses general self-efficacy in the general adult population and may be used on adolescents above age 12. The scale was originally developed in 1979, and is now available in 33 languages and has been normed in 23 countries. Cronbach's alpha internal consistency coefficients range from .76 to .90, with most tests yielding scores in the .80 - .90 range (Schwarzer & Jerusalem, 1995). According to the authors, the instrument was created to measure perceived self-efficacy in terms of handling everyday challenges, as well as adjustment after experiencing stressful events. The measure is self-administered and respondents rate each item on a 4-point Likert scale. Adding up the responses to all 10 items scores the test and total scores can range from 10 – 40. This measure was included as a general assessment of self-efficacy, especially for beginning psychology student participants who are at the outset of their doctoral program and likely had few (if any) clinical hours, supervision hours, and completed years of graduate study.

Counselor Activity Self-Efficacy Scale (CASES).

The Counselor Activity Self-Efficacy Scale (CASES; Lent, Hill, & Hoffman, 2003) is a 41-item measure that examines self-efficacy in terms of therapy-related behaviors. Part I of the CASES (Lent, Hill, & Hoffman, 2003) includes 15 helping skills (i.e. attending, reflection of feelings, interpretations, etc.) that the respondent rates in terms of current confidence level in ability to use each effectively with most clients. Part II includes 10 therapy-tasks (exploration of thoughts and feelings, knowing what to say or do after client speaks, conceptualize client cases,

etc.) that the respondent rates in terms of current confidence level to perform each task with most clients. Part III includes 16 client types, issues, and concerns (depression, suicidal, anxiety, etc.) that the respondent rates in terms of current confidence level to work with effectively. Each item is rated on a 0-9 point Likert scale with the following markers: “no confidence,” “some confidence,” and “complete confidence.”

The scale was developed and tested on 345 participants, and designed to represent three sub-factors, which include (a) the ability to perform basic helping skills, (b) management of therapy sessions, and (c) management of challenging therapy. Internal consistency coefficients for individual scales range from .79 to .94, and the total scale yielded an alpha coefficient of .90, suggesting high reliability. Two-week test retest reliability was generally consistent for individual for scale scores and ranged from .59 to .75. The authors of the study also conducted a MANOVA to determine whether the CASES (Lent, Hill, & Hoffman, 2003) can be used to assess differences in self-efficacy as a function of psychotherapist experience. These analyses found significant differences ($p < .05$) between therapists of different experience levels and indicated that the CASES (Lent, Hill, & Hoffman, 2003) can be used to assess increases in therapy self-efficacy that are acquired through psychotherapy experience; specifically, the most experienced group had significantly higher self-efficacy than the intermediary group on most subscales.

Pilot Study

A pilot study was conducted in July 2013 with permission from Florida State University’s Institutional Review Board (see Appendix B). The survey was piloted with master's level mental health counseling and social work students from Florida State University to test for feasibility of the instruments. The primary purpose of the pilot study was to test whether the

MSCEIT (Salovey, Mayer, & Caruso, 2002) had a high enough ceiling to function as an appropriate measure of emotional intelligence among graduate students in professional psychology. Similar to a typical IQ measure, the MSCEIT's (Salovey, Mayer, & Caruso, 2002) total score and branch mean score is 100 and "average" mean scores range from 85-115. The highest possible score is 150, which is three standard deviations and five points about the mean. Twelve participants participated in the pilot study. Of the 12 participants, only one person scored two *SDs* above the mean while the remaining 11 participants all scored in the average range or at least one *SD* below the mean for total emotional intelligence. For branch scores, the highest branch score yielded was 133, though most scores were in the "average" or "below average" range. This pattern of responses indicated that the MSCEIT had a high enough ceiling for use among the population of interest. In other words, the MSCEIT was a suitable instrument to measure level of emotional intelligence in a sample of mental health and social work students.

The pilot study also provided an opportunity to test the current study's research procedures. It was found that the MSCEIT (Salovey, Mayer, & Caruso, 2002) measure, which is housed on an external site due to publisher requirements, was not always completed. To encourage completion of all measures in the current study, participants had the option to be entered into a random drawing to receive one of four \$10 Starbucks gift cards. The informed consent explained that participant email addresses would be requested if they choose to participate in the random Starbucks gift card selection. Additionally, students who participated in the pilot study were also asked to comment on their ability to utilize the instruments and report on their experiences completing the included measures. Participants did not indicate any problems completing the measures. Finally, the pilot study demonstrated that the demographic questionnaire and overall research procedures were appropriate.

Procedures

Prior to actual data collection, permission to implement the current study was granted from the university's institutional review board (see Appendix A). In October 2013, data collection was implemented through an online survey system called "Qualtrics." This program, which is an online data management system, was used to create and disseminate the surveys, as well as manage the data as surveys were completed. Additionally, due to copyright law, participants were redirected to an external website containing the MSCEIT (Salovey, Mayer, & Caruso, 2002). In order to initiate the national data collection, an email containing the link to the online study was sent to psychology doctoral program training directors at all American Psychological Association accredited universities in the United States (N = 301; American Psychological Association, 2012). The email requested that they distribute the survey to students in their respective doctoral program. In order to increase the rate of training directors' assistance with distributing the study to their doctoral students, training directors were included in a raffle for one of two emotional intelligence books for their doctoral program's library. Training directors were informed of this incentive in the email invitation and winners were contacted following culmination of the study.

Participants were informed that the purpose of the study was to examine the development of emotional intelligence, as well as to assess if self-efficacy is related to emotional intelligence scores. Participants remained anonymous to the researchers. No personally identifiable information was solicited, however gender, ethnicity, age, type of academic program, years of graduate study completed, number of supervision hours accumulated, and number of practicum and/or internship (clinical experience) hours completed was requested in order to conduct analyses. Additionally, participants had the option to participate in a random gift card drawing

for one of four \$10 Starbucks gift cards if they completed the full study. If participants voluntarily chose to participate in the random gift card drawing, they were asked to enter their email address.

Data collection took place over a period of one month. Ten days following the first contact, a follow-up email was sent to all training directors, which included a reminder letter along with the link to the survey. Twenty days after the first contact, a second follow-up email was sent to all training directors, which included a reminder letter along with the link to the survey. The following section provides information on how data was analyzed and interpreted after data collection.

Planned Data Analyses

Descriptive statistics for all measures and statistical analyses were conducted using SPSS (Statistical Package for the Social Sciences; IBM Corp., 2011) Version 20.0. After deriving descriptive statistics based on demographic information, inferential statistics were performed. To explore the first research question, total scores obtained from participants' responses to the MSCEIT (Mayer, Caruso, & Salovey, 2002), which is the criterion variable, were evaluated utilizing a multiple regression analysis. The multiple regression analysis regressed total performance-based emotional intelligence on the two predictor variables, which included (a) number of years of graduate study completed and (b) total number of hours of supervised clinical experience. These analyses yielded the relative contribution (standardized Betas) of each predictor to total performance-based emotional intelligence. The correlation matrix described zero-order correlations with the criterion variable.

To evaluate research question two, and to assess for possible mediating effects, a multiple mediation bootstrapping analysis was utilized to determine if general self-efficacy and

psychotherapy-specific self-efficacy serve as the mechanism through which academic experiences predicts performance-based emotional intelligence. Both predictor variables (total years of graduate study and total hours of supervised clinical experiences), the two mediator variables (general self-efficacy and psychotherapy-specific self-efficacy), and the criterion variable (total performance-based emotional intelligence) were entered simultaneously to assess the total, indirect, and direct effects of academic experiences on emotional intelligence through the two mediator variables. Hayes (2013) asserted that indirect effects can be inferred through examining the percentile bootstrap analysis confidence intervals. In the bootstrapping analysis, cases were repeatedly randomly sampled from the data set with replacement for a total of 5,000 times. The 5,000 bootstrap resamples computed the 95% bootstrap percentile confidence intervals. Fritz and MacKinnon (2007) asserted that mediation has occurred when the confidence interval does not contain zero. Finally, significance for the present study was set to $p < .05$.

CHAPTER FOUR

FINDINGS

In order to examine whether doctoral academic experiences, as measured by number of supervised clinical hours and number of completed years of graduate study, predicted performance-based emotional intelligence, a multiple regression analysis was performed. Additionally, in order to assess whether general self-efficacy and psychotherapy-specific self-efficacy mediate the relationship between academic experiences and performance-based emotional intelligence, a multiple mediation bootstrapping analysis was performed. This chapter presents a summary of the statistical findings.

Prior to conducting analyses that test the current study's hypotheses, descriptive statistics were derived for the General Self-Efficacy Scale (GSE; Schwarzer & Jerusalem, 1995), the Counselor Activities Self-Efficacy Scale (CASES; Lent, Hill, & Hoffman, 2003), and the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Salovey, Caruso, & Mayer, 2002), which are presented in Table 2. Internal consistency coefficients were also examined for the GSE, CASES, and MSCEIT measures. Cronbach's alpha for the GSE, a 10-item measure, was found to be $\alpha = .81$. The CASES, which consists of 41 items yielded an internal reliability coefficient of $\alpha = .94$. Finally, the MSCEIT, which consists of 141 items, was found to be $\alpha = .86$. Overall, results confirmed good to excellent internal reliability.

Descriptive statistics for the predictor variable, total hours of supervised clinical experiences indicated that the variable had high kurtosis and was positively skewed (Table 2). In order to remove positive skewness and make regression analysis data more interpretable, a natural logarithm transformation was utilized for this variable. The natural logarithm transformation yielded skewness of $-.69$ ($SE = .25$) and kurtosis of $.34$ ($SE = .51$).

Table 2 *Descriptive Statistics of Primary Variables of Interest*

Variable	N	Range	Mean	SD	Skewness	Kurtosis
CASES (Raw Scores)	87	164	259.03	36.88	-.22	-.63
GSE (Raw Scores)	87	34	60.8	5.8	.78	1.53
MSCEIT (Scaled Scores)	87	65	113.05	15.84	.08	-.69
Supervised Clinical Exp. (Hours)	87	5781	988.64	1031.71	2.1	5.56
Years of Graduate Study (Years)	87	6	3.31	1.72	.52	-.56

Research Questions and Hypotheses

Research question 1.

A multiple regression analysis was performed to examine the strength of the relationship between psychology doctoral program academic experiences and performance-based emotional intelligence. All assumptions associated with multiple regression were tested and met. Results of the regression analysis found that the two predictors, total years of graduate study and total hours of supervised clinical experience, significantly explained 18.9% of the variance ($R^2 = .189$, $F(2,84) = 9.77$, $p < .001$) in performance-based emotional intelligence when looking at total scores on the MSCEIT (Salovey, Caruso, & Mayer, 2002). Likewise, the full model was significant, which means that total hours of supervised clinical experiences and total years of graduate study predicted performance-based emotional intelligence.

However, after examining the effect that each predictor had on the criterion variable, total hours of supervised clinical experiences significantly predicted performance-based emotional intelligence ($\beta = .47$, $p < .01$), while total years of graduate study did not significantly predict performance-based emotional intelligence ($\beta = -.063$, $p > .05$). Though the two predictor variables were significantly correlated, no issues of multicollinearity were detected (see Table 3) as variables did not exceed $r = .70$, which would have made data analysis problematic (Tabachnick & Fidell, 2007). Additionally, Table 3 shows that years of graduate study and total emotional intelligence scores were positively correlated ($r = .26$, $p < .01$), which indicates that

these two variables are associated but that in the regression model, emotional intelligence is better explained by total hours of supervised clinical experiences. Furthermore, all the variables were significantly correlated with the exception of general self-efficacy and performance-based emotional intelligence.

Table 3 *Correlations Between Primary Variables of Interest*

Variable	1	2	3	4	5	6	7	8	9
1. CASES	--								
2. GSE	.33**	--							
3. MSCEIT	.22*	.08	--						
4. Hours Supervised Clinical Experience	.40**	.18	.37**	--					
5. Years Grad Study	.44**	.36**	.26*	.59**	--				
6. Branch 1	.25*	.09	.72**	.21	.24*	--			
7. Branch 2	.08	.15	.72**	.33**	.25*	.37**	--		
8. Branch 3	.14	.00	.63**	.28**	.14	.12	.45**	--	
9. Branch 4	.06	.04	.63**	.17	.13	.37**	.30**	.29**	--

Note. *p<.01, **p<.001

These findings provided partial preliminary support for the first hypothesis that psychology doctoral program academic experiences significantly predict performance-based emotional intelligence. Individually, total hours of supervised clinical experience were significant in the regression model, while total years of graduate study were not significant.

Research question 2.

A multiple mediation bootstrapping analysis was used to examine the hypothesis that general self-efficacy and psychotherapy-specific self-efficacy mediate the relationship between psychology doctoral students' academic experiences, consisting of total years of graduate study and total hours of supervised clinical experiences, and the criterion variable, performance-based emotional intelligence (see Figure 2). Results of the bootstrapping analysis found insufficient evidence to suggest that years of graduate study and total hours of supervised clinical experiences indirectly influence performance-based emotional intelligence through their effect

on psychotherapy-specific self-efficacy and general self-efficacy. Therefore, the hypothesis that general self-efficacy and psychotherapy-specific self-efficacy mediate the relationship between academic experiences and performance-based emotional intelligence was not supported.

The bias-corrected bootstrap confidence interval for indirect effect of total hours of supervised clinical experience on performance-based emotional intelligence through psychotherapy-specific self-efficacy was -.65 to 1.41 and through general self-efficacy was -.83 to .23. Despite non-significant mediation findings, the total effect model ($c = .44$) and direct effect ($c^1 = 6.14$) were significant at the $p < .001$ level. Moreover, these results confirm that total hours of supervised clinical experiences directly predict performance-based emotional intelligence, as indicated in the regression analysis for research question one, yet supervised clinical experiences do not predict performance-based emotional intelligence through psychotherapy-specific or general self-efficacy.

The bias-corrected bootstrap confidence interval for indirect effect of total years of graduate study on performance-based emotional intelligence through psychotherapy-specific self-efficacy was -.23 to .80 and through general self-efficacy was -1.01 to .40. The total effect model ($c = .72$) and direct effect ($c^1 = .63$) were not significant at the $p > .05$ level. These findings suggest that total years of graduate study does not indirectly affect performance-based emotional intelligence through psychotherapy-specific self-efficacy or general self-efficacy and that years of graduate study does not directly predict performance-based emotional intelligence, which was also found in the regression analysis described in research question one.

Additional Data Analyses

The present study utilized the four-branch model of emotional intelligence, as proposed by Mayer and Salovey (2000). Additional analyses examined the effect of the two predictor

variables, years of graduate study and total hours of supervised clinical experience, on each branch of the emotional intelligence model. Results revealed that years of graduate study were significantly related to branch one (perceiving emotions) ($\beta = .21, p < .05$) and branch two (integrating emotions) ($\beta = .25, p < .05$). Total hours of supervised clinical experience significantly predicted branch two ($\beta = .27, p < .01$) and branch three (understanding emotions) ($\beta = .36, p < .001$). However, there was a non-significant relationship between the predictor variables and branch four (managing emotions).

Table 4 displays differences in mean scores between enrollment years for each of the four branches. The findings for this analysis suggest that psychology doctoral students generally improve each year in each branch of emotional intelligence. For branch one, or perceiving emotions, results indicate that students had a higher mean score in year one than year two, but that each year thereafter, mean scores were consistently higher. For branch two, or integrating emotions, scores were consistently higher each year with the exception of year two to year three. For branch three, or understanding emotions, scores were consistently higher each year with the exception of year three to year four. Finally, for branch four, or managing emotions, scores were consistently higher each year with the exception of year three to year four.

Table 4 *Descriptive Statistics of the Four-Branch Model by Psychology Doctoral Program Enrollment Year*

Variable	N	Range	Mean	SD	Skewness	Kurtosis
Year One	12	46	105.92	14.49	.61	-.48
Year Two	17	61	100.24	17.76	1.03	.49
Year Three	22	43	105.45	11.67	-.40	-.45
Year Four	21	57	105.36	13.54	-.25	.82
Year Five	15	47	112.54	13.26	.40	-.24
Total: Branch 1	87	70	105.78	14.34	.22	-.18
<u>Branch 2</u>						
Variable	N	Range	Mean	SD	Skewness	Kurtosis
Year One	12	37	96.88	11.82	-.06	-.85
Year Two	17	88	103.47	22.09	.86	.87

Table 4 Continued

Variable	N	Range	Mean	SD	Skewness	Kurtosis
Year Three	22	52	101.05	16.97	-.002	-1.46
Year Four	21	55	108.18	12.94	-.80	1.10
Year Five	15	47	109.57	11.72	-.30	-.38
Total: Branch 2	87	88	104.23	15.99	.16	.27
<u>Branch 3</u>						
Variable	N	Range	Mean	SD	Skewness	Kurtosis
Year One	12	29	109.23	10.35	-.05	-1.28
Year Two	17	51	110.35	15.28	.11	-.89
Year Three	22	51	119.90	12.11	-.24	.62
Year Four	21	55	117.32	12.88	-.83	1.63
Year Five	15	47	120.53	12.29	.33	.03
Total: Branch 3	87	66	115.95	13.29	-.21	-1.10
<u>Branch 4</u>						
Variable	N	Range	Mean	SD	Skewness	Kurtosis
Year One	12	30	106.33	9.18	-.01	-.92
Year Two	17	37	108.35	9.19	.64	.93
Year Three	22	35	108.70	11.52	.64	-.98
Year Four	21	53	106.05	13.91	-.83	1.63
Year Five	15	48	114.33	12.96	.85	.75
Total: Branch 4	87	74	108.64	11.85	.08	.98

Though not originally included as a research question or hypothesis, the study examined differences between psychology doctoral students in different enrollment years. Table 5 displays the sample size, mean, and standard deviation of performance-based emotional intelligence scores for each enrollment year. Results indicate that fifth year psychology doctoral students demonstrated the highest emotional intelligence scores ($M = 121.82$; $SD = 12.32$), which is consistent with findings in Todres, Tsimtsiou, Stephenson, and Jones (2010) and Satterfield and Hughes (2007). Additionally, results found that emotional intelligence changed three times over the five assessed years. As displayed in Table 5, the sample demonstrated that first year psychology doctoral students possessed considerable emotional intelligence ($M = 108.27$), though a minor decline in the mean emotional intelligence score from first year to second year, though scores were similar for years one and two. Findings revealed extremely minimal change

(mean score difference of .24) in emotional intelligence scores from year three to year four, and a significant surge in year five. The significant leap in scores from year one to year five provides evidence that emotional intelligence scores increased as students progressed through a psychology doctoral program.

Table 5 *Descriptive Statistics of MSCEIT Measure by Psychology Doctoral Program Enrollment Year*

Variable	N	Range	Mean	SD	Skewness	Kurtosis
Year One	12	89 - 133	108.27	14.04	.73	-.23
Year Two	17	83 - 141	106.65	17.1	.45	-.61
Year Three	22	92 - 145	114.21	16.29	.64	-.78
Year Four	21	80 - 142	114.45	15.61	-.46	.61
Year Five	15	95 - 140	121.82	12.32	-.66	-.34

Additional analyses examined whether the two predictor variables, total hours of supervised clinical experiences and total years of graduate study, predicted scores on the two measures of self-efficacy. Regression analyses found that total hours of supervised clinical experiences predicted scores on the CASES (Lent, Hill, & Hoffman, 2003), $\beta = .48, p < .001$, and the GSE (Schwarzer & Jerusalem, 1995), $\beta = .29, p < .01$. Total years of graduate study also predicted scores on the CASES ($\beta = .45, p < .001$) and the GSE ($\beta = .37, p < .001$). Finally, regression analyses examined whether both types of self-efficacy were associated with performance-based emotional intelligence. Results found that psychotherapy-specific self-efficacy, as measured by the CASES, predicted emotional intelligence ($\beta = .22, p < .05$), but that general self-efficacy, as measured by the GSE, was not significantly related to emotional intelligence ($p > .05$).

It was also of interest to examine differences in general self-efficacy and psychotherapy-specific self-efficacy between psychology doctoral students in different enrollment years (Table 6). Results revealed that fifth year psychology doctoral students yielded the highest scores for

both general self-efficacy ($M = 63.31$; $SD = 7.5$) and psychotherapy-specific self-efficacy ($M = 287$; $SD = 27.88$) (Table 6). A one-way ANOVA analysis was conducted after verifying that the data met one-way ANOVA assumptions; results revealed a statistically significant difference in psychotherapy-specific self-efficacy between psychology doctoral student participants in different enrollment years ($p < .001$), however a one-way ANOVA analysis indicated that general self-efficacy did not yield statistically significant differences between groups.

For both measures, students demonstrated lower scores in terms of general self-efficacy and psychotherapy-specific self-efficacy from year one to year two. From year two to year three, participants also revealed a decrease in general self-efficacy, while reporting a notable 18-point upturn in psychotherapy-specific self-efficacy. From year three to year four, participants' mean general self-efficacy scores were higher and the mean psychotherapy-specific self-efficacy score increased another 20 points. Finally, for year five, participants displayed the highest general self-efficacy of all five years and an additional 16.5 points on the psychotherapy-specific self-efficacy measure.

Table 6 *Descriptive Statistics of GSE and CASES Measures by Psychology Doctoral Program Enrollment Year*

Variable	N	Range	GSE			
			Mean	SD	Skewness	Kurtosis
Year One	12	53 - 74	60.69	6.3	.69	.009
Year Two	17	49 - 71	59.88	6.06	.36	-.49
Year Three	22	49 - 66	58.86	4.62	-.10	-.75
Year Four	21	54 - 74	61.50	4.58	.54	1.22
Year Five	15	55- 83	63.31	7.5	1.26	1.82
Variable	N	Range	CASES			
			Mean	SD	Skewness	Kurtosis
Year One	12	174 - 315	254.31	41.34	-.15	-.36
Year Two	17	166 - 279	232.53	32.28	-.33	-.54
Year Three	22	203 - 302	250.49	31.27	.17	-1.24
Year Four	21	210 - 317	270.50	31.78	-.44	-.86
Year Five	15	234 - 330	287.00	27.88	-.48	-.25

Finally, it was of interest to examine the four branches of emotional intelligence as mediators of the two academic experience predictor variables and total emotional intelligence scores. A multiple mediation bootstrapping analysis was used to examine the indirect effect of total years of graduate study and total hours of supervised clinical experience on total emotional intelligence scores through perceiving emotions, integrating emotions, understanding emotions, and managing emotions. The bias-corrected bootstrap confidence interval for indirect effect of total hours of supervised clinical experience on performance-based emotional intelligence through perceiving emotions was -1.21 to 3.4, integrating emotions was .28 to 2.24, understanding emotions was .91 to 4.02, and managing emotions was -.27 to 1.97. These results indicate that branches two and three (integrating and understanding emotions, respectively), serve as mechanisms through which hours of supervised clinical experience affect total emotional intelligence scores. The bias-corrected bootstrap confidence interval for indirect effect of total years of graduate study on performance-based emotional intelligence through perceiving emotions was -.77 to 1.58, integrating emotions was -.61 to .78, understanding emotions was -1.64 to .24, and managing emotions was -.97 to .81. Moreover, results of this bootstrapping analysis found insufficient evidence to suggest that years of graduate study indirectly influences performance-based emotional intelligence through its effect on the four branches of emotional intelligence.

CHAPTER FIVE

DISCUSSION

The present study assessed how academic experiences, including clinical hours, supervision hours, and years of graduate study, predicted performance-based emotional intelligence. This study was conducted to analyze the impact of experience in an APA-accredited professional psychology doctoral program on one's emotional intelligence range of functioning. The study also examined whether general self-efficacy and psychotherapy-specific self-efficacy were mechanisms through which academic experiences predicted performance-based emotional intelligence.

To conduct the study, a quasi-experimental, cross-sectional design consisting of the CASES (Lent, Hill, & Hoffman, 2003), GSE (Schwarzer & Jerusalem, 1995), and MSCEIT (Mayer, Salovey, & Caruso, 2002) measures were administered to 87 participants to evaluate psychotherapy-specific self-efficacy, general self-efficacy, and performance-based emotional intelligence, respectively. Additionally, data was collected on participants' total hours of supervision, total hours of clinical experience, and total completed years of graduate study, as it was predicted that the relationship between academic experiences and performance-based emotional intelligence would be significant. To examine the first research question, a multiple regression analysis was conducted. To explore the second research question, a multiple mediation bootstrapping analysis was performed.

After presenting a summary of findings for each research question, the limitations and delimitations of the study, implications of the findings, and directions for future research are offered. Additionally, a general conclusion is presented.

Discussion of Findings

Research question 1.

To evaluate the first research question that aimed to assess the strength of the relationship between psychology doctoral program academic experiences, consisting of two predictors: total hours of supervised clinical experiences and total years of graduate study, and the criterion variable: performance-based emotional intelligence, a multiple regression analysis was performed. One hypothesis was proposed, and it was expected that professional psychology doctoral students with a greater number of academic experiences would score higher on the MSCEIT (Mayer, Salovey, & Caruso, 2002), which is a measure of performance-based emotional intelligence. The current findings support the hypothesis that academic experiences predict performance-based emotional intelligence and provide preliminary support that in the full model, both supervised clinical experiences and years of graduate study significantly impact scores on an emotional intelligence measure, with more experience predicting higher scores of emotional intelligence. However, after examining both individual predictors, supervised clinical experience was the only variable that significantly predicted performance-based emotional intelligence, while total years of graduate study was not significant.

The findings for this research question support previous theories that emotional intelligence increases as one acquires more experience (Bar-On, 1997; Caruso et al., 1999; Day & Carroll, 2004; Dulewicz & Higgs, 2000; Langlely, 2000; Marinez-Pons & Watkin, 2000; Mayer, Caruso, et al., 1999; Van Rooy, Alonso, & Viswesvaran, 2005a), abilities, and knowledge (Easton, Martin, & Wilson, 2008). Further, these results provide preliminary evidence that emotional intelligence is a competency that can be increased, even when using the ability model such as in the current study (Mayer et al., 2002; Rieck & Callahan, 2013).

Considering each predictor, it is noteworthy that supervised clinical experiences had a statistically significant effect on emotional intelligence, while time spent in graduate school did not. As displayed in Table 3, Pearson correlation analyses in the current study suggest that years in a graduate program are positively and significantly related to emotional intelligence; however, the years of graduate study predictor variable was not statistically significant in the regression model and therefore, total years of graduate study does not appear to have a critical impact on emotional intelligence when examined in combination with hours of supervised clinical experience.

It is possible that the amount of time spent in graduate school does not function to challenge and raise one's capacity to identify, utilize, understand, and manage emotions, particularly if the student is disengaged in the program or not being "emotionally" challenged in the program. The findings in this study suggest that there is something more important than simply 'time' that leads to emotional intelligence growth. Perhaps it is more essential that individuals be taught emotional intelligence concepts, process their own emotions, review and practice their capacity to identify and manage others' emotions in supervision and psychotherapy, and generally employing emotional intelligence skills on a routine basis.

Moreover, it is the actual experience of working with clients, supervisors, and colleagues that leads to measurable change in one's total emotional intelligence. The opportunity to work with clients and supervisors leads to the development of empathy, problem solving abilities, optimism, and self-awareness, which are skills that emotionally intelligent individuals possess (Romanelli, Cain, & Smith, 2006). The nature of psychology doctoral programs is consistent with the type of instruction that is necessary to train individuals to perceive, integrate, understand, and manage emotions and the experience of interacting with others forces

psychology doctoral students to exercise their emotional intelligence muscle. When conducting individual, couples, and group therapy, psychology doctoral students gain practice listening to clients' problems, identifying and reflecting clients' emotions, engaging in dialogue regarding their feelings, and employing techniques to help clients' manage emotions. In supervision, psychology doctoral students regularly engage in emotional discourse, process client cases, conceptualize client problems, collaborate on techniques that assist clients in handling emotions, as well as work on methods to manage their own reactions, including countertransference and other emotional responses, when performing the work of a psychotherapist.

Reinforcement from clients that their emotional problems are being correctly interpreted and managed allows the psychology doctoral student to feel comfortable in their role and to continue practicing and refining their emotional intelligence competencies. Conversely, disconfirmation likely challenges psychology doctoral students to practice and place more emphasis on the identification, reflection, and management of intense emotions. Reinforcement likely occurs in supervision, as well. Whether supervisors confirm supervisees' conceptualization of client cases, recognize their emotional intelligence strengths, or alternatively, suggest areas for emotional intelligence growth, psychology doctoral students are regularly developing their emotionally intelligence competencies, as found in the present study. Moreover, these type of experiences facilitate doctoral students' ability to monitor emotions in clients and themselves, apply emotional information to associate ideas and connect feelings, contemplate clients' emotional information and make associations between emotional incidents, and regulate their own and clients' emotions for the purpose of supporting client development, as well as manage emotions to strengthen psychotherapy results. Another possible explanation for the development of emotional intelligence may lie in the cognitive development that occurs as

one acquires experience in a psychology doctoral program. As psychology doctoral students progress through their doctoral program, acquire clinical hours, complete coursework, attend trainings and seminars, participate in supervision, and develop as psychologically-minded individuals, cognitive complexity that assists in case-conceptualization, including emotional identification, perception, and integration, is likely to develop.

The value of purposeful instruction on emotional intelligence has been underscored in the literature due to consistent findings that emotional intelligence can be taught (Dulewicz & Higgs, 2000; Mayer et al., 2002; Mayer et al., 1999; Langley, 2000; Marinez-Pons, 2000; Nelis, Quidbach, Mikolajczak, & Hansenne, 2009; Slaski & Cartwright 2003; Satterfield & Hughes 2007; Ulutas & Omeroglu 2007; Watkin, 2000). Inherent to the work of a psychologist, it is expected that emotional intelligence concepts are often implicitly taught, practiced, reviewed, and reiterated during clinical work, clinical courses, and especially during supervision. Specifically, it is possible that emotional intelligence concepts and skills are already being taught in courses and echoed in supervision, though instructors and supervisors may not recognize or explicitly refer to these instances as emotional intelligence training. Further, this may be another explanation for the significant finding in this study.

In their research on master psychologists and their development of the CER theory, Skovholt and Jennings (1999) emphasized the qualities of emotionally skilled psychologists. According to the authors, master psychologists excel in the emotional domain due to a highly developed appreciation of their own thoughts, emotions, and needs and the recognition of their ongoing growth as a human. These specific qualities are likely less present in beginning psychology doctoral students who presumably possess little to no experience in the psychology field. Instead, these qualities develop as one learns about human development, psychopathology,

and self-actualization, begins to appreciate the importance of personal and professional introspection, and recognizes their own strengths and limitations. Subsequently, this type of self-awareness increases one's capability to assess others' thoughts, emotions, and needs, and ultimately, enhances emotional intelligence competencies that result in conducting psychotherapy in an emotionally intelligent manner.

It is interesting that years of completed graduate study did not individually predict emotional intelligence in the regression model. Nevertheless, an explanation for this finding is offered. Despite the Pearson correlation finding that there is a positive and significant relationship between years of graduate study and total emotional intelligence scores, simply being enrolled in a doctoral program does not guarantee that emotional intelligence concepts are being learned or practiced; therefore, the variable 'total years of graduate study' may not serve the function of raising total emotional intelligence scores. The sample in the current study was comprised exclusively of psychology doctoral students who we hope are learning and refining emotional intelligence competencies and who we expected to yield significant results when measuring the impact of time spent in a graduate program on emotional intelligence, yet this predictor was non-significant. If the result had been significant, then it would be plausible to suggest that any graduate student in any type of graduate program should demonstrate growth in their emotional intelligence purely as a result of time spent in graduate school. Consequently, the finding in the present study is logical, as graduate school itself does not function to raise emotional intelligence.

Furthermore, if years in graduate school had predicted emotional intelligence, then simply being in a graduate program would increase emotional intelligence in all graduate students, regardless of academic program or specifically, whether or not a student received

psychology or emotional intelligence training. Correlation analyses indicated that there is a positive and significant relationship between years of graduate study and total emotional intelligence scores, yet regression results for this variable were non-significant; these findings may imply that being in graduate school is somewhat associated with emotional intelligence development, but the overall results of this study suggest that it is more important to have opportunities to exercise one's emotional intelligence muscle while in a graduate program. Moreover, it appears important to revise the proposed model to measure time spent in a graduate program with purposeful emotional intelligence practice. Future researchers could examine doctoral programs that specifically incorporate emotional intelligence concepts into their coursework, which would likely produce different statistical results.

Also, it is important to address how the current study's results relate to the controversial discussion regarding whether emotional intelligence is "ability" or a "competency," with the latter suggesting room for growth and improvement. As discussed in chapter two, scholars have routinely debated whether emotional intelligence is a form of intelligence, primarily due to intelligence and ability being characterized by their stability and limited room for development. As such, some authors have proposed that emotional intelligence is more similar to personality (Van Rooy, Viswesvaran, & Pluta, 2005a). Nonetheless, other researchers have found evidence that emotional intelligence, and more specifically the ability model, which was utilized in this study, is a legitimate form of intelligence that is distinct from personality theories (Bar-On, 1997; Day & Carroll, 2004; Mayer, Caruso, & Salovey, 1999; Van Rooy, Alonso, & Viswesvaran, 2005). Additionally, researchers have purported that emotional intelligence best falls under the ability model, but that it can be increased through personal experiences (Rieck & Callahan, 2013). Such statements in the literature negate extant literature on what intelligence is and how

it occurs.

When considering long-standing theories that assert that intelligence is a static ability, this study provides interesting preliminary evidence that emotional intelligence may change as psychology doctoral students acquire more clinical, supervision, and academic experience. This finding may mean that emotional intelligence should be considered a competency that can be increased. Nevertheless, while changes in emotional intelligence were statistically significant, observed scores between first year and fifth year did not differ by more than 13 points, or almost one standard deviation. In terms of clinical significance, this may suggest that emotional intelligence is somewhat stable and that ability model researchers are correct when referring to emotional intelligence as a form of intelligence and as “ability.” If psychology doctoral students’ emotional intelligence is generally stable and emotional intelligence is a predictor of performance (Bharti & Sidana, 2012; Cherniss, Extein, Goleman, & Weissberg, 2006; Kaplowitz, Safran, & Muran, 2011; Lopes et al., 2004; Rieck & Callahan, 2013; Rosete & Ciarrochi, 2005; Van Rooy & Viswesvaran, 2004), perhaps it is important for psychology doctoral programs to assess emotional intelligence during the program application process and recruit students with average to superior emotional intelligence scores. Related to the finding that emotional intelligence may be constant, the correlations matrix (Table 3) shows that the variables in this study maintained only small to moderate correlations, according to Pearson’s r effect size guidelines.

Specifically, the MSCEIT (Mayer, Caruso, & Salovey, 2002) produced moderate correlations with supervised clinical experiences ($r = .36, p < .001$) and years of graduate study ($r = .27, p < .01$). While there was an effect of experience on emotional intelligence, the effect is not large. Practically, this may mean that emotional intelligence is relatively stable, but that

psychology doctoral program experiences can slightly improve emotional intelligence. Only years of graduate study and supervised clinical experience hours yielded a large correlation ($r = .6, p < .001$), and this finding is logical since students acquire more clinical hours each year they are in a psychology doctoral program. Moreover, the discrepant findings regarding whether emotional intelligence is more constant or malleable may imply that emotional intelligence falls somewhere between IQ and being a competency, though much more research is needed in this area. The next subsection provides a discussion of the findings for research question two.

Research question 2.

The second research question sought to examine whether academic experiences and performance-based emotional intelligence are mediated by general self-efficacy and psychotherapy-specific self-efficacy. Two hypotheses were proposed, and it was expected that the two types of self-efficacy would serve as mediators between academic experiences and performance-based emotional intelligence. A bootstrapping analysis was conducted to evaluate whether general self-efficacy and psychotherapy-specific self-efficacy are mechanisms through which academic experiences impact performance-based emotional intelligence.

Hypothesis B.

It was hypothesized that general self-efficacy would mediate the relationship between academic experiences and performance-based emotional intelligence. Additional analyses revealed that general self-efficacy scores were noticeably different from year one to year five (Table 6) and regression analyses found that total hours of supervised clinical experiences predicted scores on the GSE (Schwarzer & Jerusalem, 1995). These findings provided further theoretical support for measuring whether general self-efficacy mediates the relationship between academic experiences and emotional intelligence. Nonetheless, findings for this

research hypothesis revealed that there was insufficient evidence to determine that academic experiences, as measured by total years of graduate study and total hours of supervised clinical experience, had an indirect effect on emotional intelligence through general self-efficacy. Therefore, the hypothesis for this research question was not supported.

This non-significant finding may be due to problematic features contained in the proposed model (see Figure 2). Though analyses revealed that general self-efficacy increased from year one to year five and that supervised clinical experiences significantly predicted scores on the general self-efficacy measure, general self-efficacy was not a significant predictor of emotional intelligence. Therefore, it is possible that the model originally proposed in this study was not valid. Another conceivable reason for the non-significant finding may be the use of a self-report self-efficacy questionnaire in conjunction with a performance-based emotional intelligence measure. It is possible that one's self-efficacy self-appraisal may not translate to actual performance on an ability model emotional intelligence measure. This is because we cannot always trust that individuals have enough insight and self-awareness into their self-efficacy characteristics to answer questionnaire items reliably (Matthews, Zeidner, & Roberts, 2012).

Additionally, Paulhus (2002) performed research that examined self-report questionnaires; he found that respondents often unintentionally exaggerate their character assets and curtail their limitations. In the future, it would be interesting to collect similar data and conduct comparable analyses with the GSE (Schwarzer & Jerusalem, 1995) and a self-report questionnaire of emotional intelligence, such as the SSEIT (Schutte et al., 1998). Due to the self-report nature of these measures, researchers may possibly find significant correlations, though this could be a result of participants playing up their self-efficacy and emotional intelligence

strengths. Similarly, it would be important to conduct related analyses employing an objective measure of psychotherapy competence for the mediator variable and the MSCEIT (Mayer, Caruso, & Salovey, 2002) measure for the outcome variable, as both tests would provide objective data that may yield a stronger relationship.

While additional analyses supported previous findings that total hours of supervised clinical experiences and total years of graduate study significantly predicted higher general self-efficacy (Ferrell-Swan, 1999; Johnson, Baker, Kopala, Kiselica, & Thompson, 1989; Mei Tang et al., 2004), the predictor variables did not have an indirect effect on emotional intelligence through general self-efficacy. The relationship between these variables has not been previously assessed, though this study provides preliminary evidence that a relationship does not exist. It is presumable that the constructs related to general self-efficacy, such as resiliency, motivation, resourcefulness, and confidence, have no relation to emotional intelligence. This is because emotional intelligence focuses on the identification, interpretation, utilization, and management of emotions, whereas general self-efficacy concepts examine optimistic self-beliefs. Therefore, one's self-beliefs about their general ability to persevere do not translate to actual performance on an emotional intelligence measure, as evidenced by the results in the present study.

Likewise, the finding for this research question may be an indicator that students are over-rating their self-efficacy and not demonstrating commensurate emotional intelligence performance with what they might expect. Relatedly, the result may indicate that participants' have a false sense of reality. Though participants may believe they are efficacious and resilient, their actual performance on a measure of emotional intelligence suggests otherwise. However, participants' positive self-ratings of self-efficacy may essentially serve as a personal and professional strength, particularly when approaching their self-ratings from a self-fulfilling

prophecy perspective. Their positive self-ratings are likely a result of increased self-assurance that develops from acquired doctoral program experiences and that can be observed in their interactions with peers, supervisors, instructors, and clients. Such high self-efficacy ratings likely help psychology doctoral students to feel more confident and secure in their everyday functioning, and particularly within their role as a psychology trainee and as a psychotherapist. The next subsection examines findings associated with the third research hypothesis.

Hypothesis C.

While additional analyses supported previous findings that total hours of supervised clinical experiences and total years of graduate study significantly predicted higher psychotherapy-specific self-efficacy (Table 6) (Johnson, Baker, Kopala, Kiselica, & Thompson, 1989; Mei Tang et al., 2004), the two predictor variables did not indirectly predict performance-based emotional intelligence through psychotherapy-specific self-efficacy. It is possible that while experiences and time spent in graduate school appear to lead to higher self-appraised scores of self-efficacy, such high self-appraisal does not explain how academic experiences impact actual performance on an emotional intelligence measure. This finding is interesting since an additional regression analysis found that self-appraised scores on the CASES (Lent, Hill, & Hoffman, 2003), which specifically assesses psychotherapy skills that are congruent with emotional intelligence competencies, directly predicted emotional intelligence yet did not serve the hypothesized mediator function.

It is important for psychology doctoral students in training to develop competence and confidence (Marshall & Andersen, 1995), and clinical training experiences are expected to enhance clinical confidence (Bush et al., 1993; Derald et al., 2002). The significant finding that psychology doctoral students' academic experiences predicted high self-appraised

psychotherapy-specific self-efficacy may be an indicator that psychology doctoral students possess ego strength, optimism, and resiliency that permits them to rate themselves highly in areas measuring psychotherapy performance and that this effect strengthens as one gains more academic experience. This finding may imply that psychology doctoral students generally feel supported and valued, which therefore allows them to feel more confident in their psychotherapy skills. Additionally, this result demonstrates that students' believe their experiences in a psychology doctoral program are contributing to the development of their psychotherapy skills. Further, a regression analysis revealed a statistically significant relationship between psychotherapy-specific self-efficacy and performance-based emotional intelligence, yet the mediation analysis was not significant. The non-significant finding most likely means that the originally proposed mediation model was not valid (see Figure 2), and more specifically, that academic experiences have a greater direct effect on performance-based emotional intelligence rather than through psychotherapy-specific self-efficacy.

Though the results of this study revealed that students' believe their experiences are contributing to the development of their psychotherapy skills, students' beliefs about their psychotherapy competencies do not appear to be the reason that academic experiences impact emotional intelligence measure. Moreover, the general finding from this study is that high self-appraisal of psychotherapy skills is not the method through which academic experiences affects emotional intelligence, but that academic experiences directly impact emotional intelligence, as revealed in the findings for the first research question.

Additional analyses.

In addition to the primary research questions that measured the impact of the two predictor variables on total emotional intelligence scores, it was of interest to assess the effect of

the two predictor variables, total years of graduate study and total hours of supervised clinical experience, on all four branches of Salovey and Mayer's (2000) emotional intelligence model. Results found that years of graduate study were significantly related to the first branch, or emotional perception. This branch is considered the most basic of the four branches and primarily asserts that an individual can recognize emotion in others' facial and body expressions. Emotional perception is considered a basic social skill as it allows individuals to appreciate subtle social cues. As individuals get older and acquire more social experiences, it is foreseeable that their emotional perception capacities increase; the significant variable 'total years of graduate study' may represent a general tendency to improve emotional perception skills as one gets older and acquires more social experience. Alternatively, since the sample in this study was comprised of professional psychology doctoral students, it is plausible that the very experience of being in a psychology doctoral program increases one's capacity to recognize non-verbal emotional communication. Stressful graduate program experiences may heighten one's sensitivity and acute awareness of emotional events in both others and themselves. Regularly interacting with clients, supervisors, professors, and peers may provide opportunities for psychology doctoral students to practice sensing emotional information. In the future, it would be interesting to examine whether a similar effect occurs in other types of doctoral programs.

Conversely, total hours of clinical experience did not significantly predict emotional perception. This finding is surprising since it was expected that clinical experiences would strengthen one's ability to perceive emotions. Additionally, it does not appear that perceiving emotions is a trait as it is believed to develop from a young age (Mayer et al., 1997) and the present study found that years of graduate study significantly affected emotional perception scores. Nonetheless, it is possible that general life experiences, such as ongoing interaction with

others, is what modifies emotional perception skills and that more specific experiences, such as clinical work and supervision, do not function to increase emotional perception.

Both years of graduate study and total hours of supervised clinical experience were significantly related to the second branch, or emotional integration. This branch describes the use of emotions to facilitate thoughts and ultimately, actions. Both predictor variables provide opportunities for psychology doctoral students to practice implementing emotional information into cognitive processes, such as when problem-solving or making decisions that guide their behaviors. Similar to the finding for branch one, total years of graduate study may reflect the general life experience one gains utilizing emotional information to inform personal or academic decisions and actions. Likewise, psychology trainees regularly use emotional information during client sessions when reflecting feelings, paraphrasing and summarizing clients' statements, offering ideas for client homework assignments, and when conceptualizing cases and planning treatment during supervision. Both mediums (e.g., predictors) provide trial and error opportunities for incorporating emotional information into cognitive processes, problem solving, decision-making, and action planning. Lastly, the findings for this analysis suggest that emotional perception is a competency that may be increased.

Total clinical experience hours also significantly predicted branch three, or emotional understanding. This advanced branch represents the capacity to correctly label emotions, recognize connections and distinctions among emotional labels, and appreciate complex relationships among emotions. The experience of correctly interpreting and labeling emotions in client sessions and supervision and receiving feedback from clients and supervisors on the accuracy of emotional labels likely impacts one's emotional understanding skills. Clinical and supervision experiences provide thorough practice in emotional understanding activities. These

experiences allow the psychology doctoral student to refine their performance in the emotional understanding arena. Moreover, the finding for this analysis indicates that emotional understanding is a competency that can be increased and that clinical experiences allow psychology doctoral students to develop accuracy in identifying precise emotions, perceiving abrupt changes in emotions, and perceiving how emotions develop over time. Total years of graduate study was not significantly related to emotional understanding, as it is less likely that psychology doctoral students have opportunities to practice refining emotion interpretation and labeling as a mere result of time spent in a graduate program.

Lastly, both predictor variables were non-significant in predicting branch four, or emotional management. Managing emotions, which is the higher-order branch of emotional intelligence, is also the most challenging of the four branches. Emotional management refers to the capacity to regulate emotions within one's self and others. The non-significant finding in this study may suggest that emotional management is a fixed ability and not a competency that can be developed. However, Todres, Tsimitsiou, Stephenson, and Jones (2010) found that fifth-year medical school students' scored significantly higher in the managing emotions domain. Perhaps it is not experience in graduate school or experience working with clients and supervisors that increases emotional management skills, but that other variables, such as self-care habits, personal therapy experiences, age, conflict style, etc. can modify emotional management skills. Future research should examine predictors of emotional management to assess whether this domain is a competency that can be increased and what factors contribute to changes in managing emotions.

Related to the previous additional analysis, Table 4 provides descriptive information regarding differences in mean branch scores between enrollment years. For branch one, or emotional perception, fifth year students displayed the highest scores ($M = 112.54$; $SD = 13.26$).

This relates to the previous finding that years of graduate study significantly predicted branch one scores. Nonetheless, it was interesting to observe that year one, year three, and year four revealed very similar mean scores for emotional perception, but that emotional perception scores were higher by seven points, on average, in year five. This finding suggests that while emotional perception skills may change as a result of years of graduate study, this change does not happen until the last year of a psychology doctoral program. This may be attributed to more intensive training or opportunities for emotion identification during the internship year, as well as greater expectations of competency and increased autonomy.

Fifth year students also demonstrated the highest scores for branch two, or emotional integration ($M = 109.57$; $SD = 11.72$). However, unlike branch one results, emotional integration skills appear to consistently increase each year with the exception of year two to year three, where scores were slightly lower. This finding confirms the previous regression analysis that found that years of graduate study and total hours of supervised clinical experience predict emotional integration scores. For branch three, or emotional understanding, participants' scores increased each year except from year three to year four where a minor reduction in scores was revealed. Similarly, scores increased each year for branch four, or emotional management, though a small decrease occurred from year three to year four. Findings for these analyses are complementary; if fourth year students' emotional understanding skills decreased, it is logical that their emotional management skills would also be lower since their capacity to precisely discern emotions has declined. For all four branches, fifth year students' displayed the highest scores, though years of graduate study and hours of supervised clinical experience were not significant predictors of branch four. Nevertheless, mean scores were highest for fifth year

students, which suggests that acquired experiences or other variables not tested in this study may be related to the development of emotional management skills.

The outcome that more doctoral academic experience is related to higher emotional intelligence supports Todres, Tsimtsiou, Stephenson, and Jones' (2010), who found that final year medical students exhibited significant improvement on the most higher-order branch of emotional intelligence, and Satterfield and Hughes (2007), who discovered that emotional intelligence increased through engagement in medical coursework. In the present study, differences in total emotional intelligence scores between enrollment years was also examined. Fifth year psychology doctoral students demonstrated the highest emotional intelligence scores ($M = 121.82$; $SD = 12.32$), whereas first year psychology doctoral students displayed emotional intelligence scores that were 13 points lower on average ($M = 108.27$; $SD = 14.05$) (Table 5). Nonetheless, first year psychology doctoral students had near high-average emotional intelligence scores, which suggests that students' entered the program with sufficient baseline emotional intelligence. This may be an indicator that students who pursue psychology as a career are already emotionally intelligent. Through feedback from friends, family, supervisors, and previous instructors, as well as prior experiences listening to others' problems and being emotionally present, they may have recognized their emotional intelligence strengths and chose to pursue a psychology degree. Likewise, it is possible that psychology doctoral students who possess a higher baseline emotional intelligence are better able to enhance more specific emotional intelligence skills at a quicker rate than those individuals who score lower on a measure of emotional intelligence. This may be a distinguishing factor between those students who successfully move through a professional psychology doctoral program and those who dropout or who are not as successful. Additionally, it is notable that different enrollment years

demonstrated incremental qualitative differences in emotional intelligence. Specifically, both first and second year students were in the “average” range, third and fourth year students were in the “high average” range, and fifth year students were in the “superior” range (Table 5).

The most parsimonious explanation for this is the impact of experience on emotional intelligence, such as accumulation of curriculum, practicum, internship, supervision, seminars, professional trainings, and ongoing interaction with clients. Further, these experiences may be the reason that notable emotional intelligence changes occur between year one and year five. While some psychology doctoral students’ have previous graduate school experience in a master’s program related to psychology, it is more likely that most students enter into a doctoral program with little to no experience in psychology graduate-level coursework, few, if any, hours of experience working with clients or receiving supervision, as well as limited experience participating in seminars and psychology-related professional trainings. By working with clients in various settings, psychology doctoral students have the opportunity to regularly practice their emotional intelligence skills, as well as receive consistent training on emotional intelligence related topics while in graduate school courses and through additional didactic and experiential opportunities.

Moreover, the observed difference in emotional intelligence scores between first year and fifth year students indicates a noticeable growth in emotional intelligence competencies that are likely a result of psychology doctoral program experiences, such as those described above. This study provides preliminary evidence of the potential for emotional intelligence growth as students’ progress through a psychology doctoral program. Future research should more closely examine changes in emotional intelligence in psychology doctoral students through the use of

longitudinal designs, pre and post-tests, as well as interventions to test the plasticity of emotional intelligence.

Based on previous research and the results of this study, it is logical that academic experiences, such as years in graduate school, clinical hours, and supervision, increase both psychotherapy-specific and general self-efficacy (Easton, Martin, & Wilson, 2008; Schendel, 2010). As psychology doctoral students acquire more experience in a doctoral program, it is anticipated they develop confidence in their capability to perform the work of a psychologist. Due to the self-report nature of the CASES (Lent, Hill, & Hoffman, 2003) and GSE (Schwarzer & Jerusalem, 1995), the finding that academic experiences predict psychotherapy-specific self-efficacy and general self-efficacy supports the expectation that students feel more competent as they immerse into a doctoral program. Further, the statistically significant difference in psychotherapy-specific self-efficacy between enrollment years ($p < .001$) indicates that participants' perceived capacity to practice psychotherapy notably increases each year, and that this effect is not due to chance alone.

After examining scores for each enrollment year, it was interesting to observe that participant scores for both psychotherapy-specific self-efficacy and general self-efficacy were lower in the second year than the first year. Since the measures utilized in this study were based on self-report, it is possible that second year students had developed a higher sense of self-awareness and introspective skills that first year students did not display. Their heightened self-awareness and capacity to look within the self may have resulted in more genuine responses to the self-efficacy questionnaires, which thereby resulted in lower scores. Similarly, since data was collected at the beginning of the fall semester, it is possible that first year students had not begun to experience typical doctoral program stressors and were still feeling confident and

relaxed. Conversely, second year students were likely in the midst of research, practica, and coursework, as well as possessing previous doctoral program experience that may have led to heightened levels of stress and perceived lack of success, which consequently resulted in ranking their self-efficacy beliefs lower.

For general self-efficacy, participants also demonstrated lower scores from year two to year three, which could be explained by the same reasoning discussed above. For psychotherapy-specific self-efficacy, students' scores were 18-points higher in year three than year two. This noteworthy upsurge is likely a result of acquiring over two years of clinical, supervision, coursework, and didactic training experience in a psychology doctoral program. From year three to year four, both general self-efficacy and psychotherapy-specific self-efficacy scores were higher. The positive change in general self-efficacy scores may be due to a reduced course load, if not successful completion, of academic coursework. During the fourth year, many students have finished coursework, are applying for internship, and working on dissertation. While the internship application process and dissertation can be both demanding and stressful, there is often more free time to attend to these program components and consequently, stress levels may be lower. Additionally, students likely develop a heightened sense of accomplishment after finishing doctoral program coursework and reaching the stage of dissertation work and internship applications. Such feelings of accomplishment may explain why participants' self-efficacy scores are distinctively higher. Similar reasoning can help explain high scores for both general self-efficacy and psychotherapy-specific self-efficacy for fifth year participants. Moreover, positive inclines in self-efficacy likely happen as a result of consistent opportunities to engage in clinical practice, interact with clients, professors,

supervisors, and colleagues, as well as from an increasing sense of accomplishment and self-confidence.

Nonetheless, self-efficacy is one's belief in his or her own capacity and aptitude to engage in goal-oriented behaviors (Bandura, 1977). In many ways, self-efficacy is reliant upon the self-fulfilling prophecy (Sternberg, Critchley, Gallagher, & Raman, 2011), and it is conceivable that psychology doctoral students who view themselves as generally competent and proficient in psychotherapy will likely perform better. Similarly, the outcome that time spent in a graduate program leads to increases in psychotherapy-specific self-efficacy confirms the results of Melchert et al. (1996) and Schendel (2010).

It was also of interest to examine whether psychotherapy-specific self-efficacy predicts emotional intelligence. Findings revealed that the measure of psychotherapy-specific self-efficacy predicted performance-based emotional intelligence ($\beta = .22; p < .05$); this result is supported by previous studies that identified a relationship between these variables (Easton, Martin, & Wilson, 2008). It is noteworthy that psychology doctoral students who appraised themselves as capable of performing psychotherapy tasks also performed better on a performance-based measure of emotional intelligence. This finding supports the validity of the psychotherapy-specific self-efficacy questionnaire and suggests that one's self-appraisal of their capacity to perform the work of a psychologist is confirmed by their emotional intelligence competencies, which are an important aspect of psychotherapy. Since conducting psychotherapy requires emotional intelligence, the association between these variables is logical. Similarly, the significant finding that psychotherapy-specific self-efficacy predicts performance-based emotional intelligence supports the relationship amongst these variables. Conversely, general self-efficacy was not related to performance-based emotional intelligence. While having a

general sense of resiliency, motivation, and resourcefulness can conceptually be linked to practicing psychotherapy, these characteristics are less associated with emotional intelligence, which focuses on the identification, utilization, appreciation, and management of emotions.

Further analyses examined the four branches of emotional intelligence as mediators of the two predictor variables, total years of graduate study and total hours of supervised clinical experiences, and the criterion variable, total emotional intelligence scores. Results indicated that total years of graduate study did not have an indirect effect on total emotional intelligence scores through the four branches of emotional intelligence. However, branches two and three (integrating and understanding emotions, respectively) appear to mediate the relationship between total hours of supervised clinical experience and total emotional intelligence scores. This finding is an indicator that as psychology doctoral students acquire more experience working with clients and supervisors, they are developing in their capacity to utilize emotional information in their thought processes, as well as to correctly label and discriminate between emotions, and that development in these two areas is contributing to their overall emotional intelligence scores. Conceptually, it appears important for psychology doctoral students to develop in these areas in order to see changes in overall emotional intelligence, particularly since integrating and understanding emotions are part of the four branches of emotional intelligence. Furthermore, these two branches are foundational elements of emotional intelligence, so it is unlikely that individuals would see changes in their total emotional intelligence scores if they were not developing in the integrating and understanding emotions branches. Similarly, it appears that examining the development of the individual branches of emotional intelligence is a more specified approach to assessing how total emotional intelligence scores may change and how supervised clinical experiences may be contributing to total emotional intelligence scores.

Limitations of the Study

The present study contains several factors that may limit its ability to be generalized to the larger population. For this reason, important limitations that may impact the internal and external validity of the present study are addressed in the following subsections.

Limitations in sampling.

This study is limited by its design, which was causal-correlational, and which means that the sample was based on availability of participants and those training directors willing to participate. In order to collect data, the survey was emailed to directors of clinical training at all APA-accredited professional psychology doctoral programs (N = 301). However, only those programs that disseminated the invitation to their students for participation in the study were included in the sample, which resulted in 87 participants who completed the full study. A notable limitation of the study is that the power analysis, which was conducted a priori, required the effect size to be estimated since it was unknown what the actual effect size would be. After analyzing data on the 87 participants, results revealed that the estimated effect size of .25 was too high, and therefore, non-significant findings for research question two may be linked to an inadequate sample size. Moreover, sample size may be the reason for the non-significant primary mediator analysis results, and future studies should attempt to acquire a sample that is much larger in order to test whether psychotherapy-specific self-efficacy and general self-efficacy can mediate the relationship between academic experiences and emotional intelligence while detecting a minimum statistical effect of .25.

Additionally, since participation in the study was voluntary, all eligible participants did not respond and subsequently, are not represented in this study. Participants' personally identifiable information was not collected; therefore, it is unclear what universities distributed

the survey to their students, what universities are represented in the sample, and what regions were included in the sample. Other sampling characteristics that may have impacted the results of the study include that participants were predominantly female (82.4%), though this figure is comparable to the APA demographic data on female students, which comprise 77.3% of students in APA-accredited clinical and counseling psychology doctoral programs (APA, 2010). Additionally, 53.9% of participants were between the ages of 26 and 29, and 80.2% were Caucasian, which is also similar to the nationwide demographic data that indicated the makeup of APA-accredited clinical and counseling psychology doctoral programs was 68.48% Caucasian (APA, 2010). Consequently, findings can only be generalized to similar demographic categories, though the sample contained within this study seems to reflect the APA psychology doctoral student population in the United States. Also, 54.9% of participants were enrolled in a clinical psychology doctoral program, which tend to be largely research-based and less focused on clinical hours. Additional analyses revealed that clinical psychology participants' had $M = 503.98$ clinical hours and $M = 133.18$ supervision hours, whereas counseling psychology participants had more clinical hours ($M = 605.33$) and supervision hours ($M = 142.87$). Since clinical psychology doctoral students had less supervised clinical hours, which were a significant predictor of emotional intelligence in the overall results of this study, it is possible that the results of this study may look different in a sample comprised exclusively of clinical or counseling psychology doctoral students.

Another possible limitation of this study is its cross-sectional design, which means that data was only collected from participants at one point in time and which may limit the internal and external validity of the study. Cross-sectional research allows the investigator to take a “snapshot” of participants in an attempt to test hypotheses. However, cross-sectional research

does not allow researchers to measure change or to test a temporal relationship. In the present study, academic experiences were statistically significant in predicting emotional intelligence scores; yet, the data in this study does not allow the researcher to suggest that emotional intelligence increases as students' progress through a psychology doctoral program. In the future, longitudinal studies should attempt to measure changes in participants' emotional intelligence scores over a period of time. Additionally, it is possible that those students who were further along in their psychology doctoral program were successful in progressing through their doctoral program because they possessed an initial higher level of baseline emotional intelligence. Through longitudinal research, it would be interesting to examine whether students who drop out of a professional psychology doctoral program differ in emotional intelligence from those students who remain in a professional psychology doctoral program. Perhaps higher emotional intelligence scores were observed in year five because these students were emotionally intelligent enough to succeed in a psychology doctoral program, whereas students who are lower in emotional intelligence may have already dropped out of a psychology doctoral program. Nonetheless, data regarding emotional intelligence differences between matriculating and drop out students was not collected in this study.

Likewise, cross-sectional studies introduce the possibility for non-response bias, which refers to the inability to measure characteristics of non-responders. In the current study, individuals who didn't respond to the request for study participation may have provided different data that could have impacted the outcomes contained within this study. This is related to self-selection bias, which is another form of participant sampling limitations. Since participation in the study was voluntary, the sample may be limited by self-selection bias. This means that participants may have elected to complete the study because they were interested in the study's

emotional intelligence topic, sampling methods, or they perceived themselves as being highly emotionally intelligent (Paulhus, 2002). Likewise, students who didn't choose to participate in the study may not have been interested in the topic or don't perceive themselves as emotionally intelligent.

Limitations in measures.

Though the MSCEIT (Mayer, Salovey, & Caruso, 2002) is highly regarded in the literature and contains acceptable to excellent internal consistency, it still possesses some notable flaws. As described in chapter two, measuring a subjective construct can never be done precisely as there is no one absolute correct answer for test items. To manage this, the MSCEIT's authors normed the measure on a group of emotion researchers and a typical normative sample, thereby deriving "correct" answers for each scoring method. However, the test's objective nature of scoring may result in participants earning lower emotional intelligence scores though selecting what may be otherwise acceptable answers.

Another limitation contained within this study is its use of self-report measures, which contain inherent limitations due to their reliance on self-appraisal (Matthews, Zeidner, & Roberts, 2012; Paulhus, 2002; Van Rooy & Viswesvaran, 2007) and response bias (Easton, Martin, & Wilson, 2008). Despite acceptable to excellent psychometric properties, the two mediator variable measures employed in the present study were based on self-report, so it is possible that participants over or under-reported on test items. This subjective method of assessment may have positively or negatively impacted the statistical findings in this study. It is suggested that researchers employ objective measures when possible, though this is not always available in human studies or psychological research.

Likewise, it is possible that the mediator analyses did not find significant results due to the use of self-report self-efficacy measures in conjunction with the MSCEIT (Mayer, Salovey, & Caruso, 2002), a performance-based measure of emotional intelligence. To address this, it may have been useful to include an objective measure of psychotherapy competence to assess whether actual psychotherapy performance was related to emotional intelligence performance, as well as to examine whether academic experiences were related to assessed psychotherapy performance. Additionally, the present study did not contain additional measures that may have added to the dataset and provided valuable interpretative information. For example, it would have been worthwhile to include supervisor or faculty ratings of participants' emotional intelligence and psychotherapy performance. This information could have assisted in determining whether psychology doctoral students' perceptions of their psychotherapy-specific self-efficacy and general self-efficacy were realistic, as well as whether their emotional intelligence performance is evident to clinical supervisors or instructors. Finally, the measures in the survey were not counterbalanced, which may have resulted in possible fatigue, sequencing, or practice effects that created bias or confounded the current study's results.

Delimitations

Several factors limit the generalizability of this study and the following delimitations are connected with this study. In terms of the sample, eligible individuals included those who were enrolled in an APA-accredited professional clinical, counseling, or school psychology doctoral program. Additionally, the invitation to participate in the online study was sent to all Directors of Clinical Training (DCTs) of professional psychology doctoral programs. Only those programs that disseminated the invitation to their students for participation in the study were included in the sample. Additionally, participation in the study was voluntary, which means that

all eligible participants did not respond and were not represented in this study. In terms of instrumentation, the measures of general self-efficacy and psychotherapy-specific self-efficacy rely on self-report, so it was possible for respondents' to over or under-report on the self-efficacy measures. Likewise, there are several measures of emotional intelligence and self-efficacy, and not all measures were used in this study. Finally, experimenter bias could have influenced the style and writing of the current paper. Specifically, based on the researcher's interest in the development of psychology trainees, it is conceivable that the material included in the literature review, the decision regarding which measures were used, and how results were inferred could include bias.

Implications of the Study

The present study contains several implications that are relevant to APA graduate-benchmark training workgroups, APA-accredited professional psychology doctoral programs, professional psychology doctoral students, as well as doctoral faculty and clinical field supervisors. For example, findings revealed that a greater number of supervised clinical experiences predict performance-based emotional intelligence, which suggests that acquiring clinical experience is an important aspect of developing one's emotional intelligence range of functioning and which supports Rieck and Callahan's (2013) study. The following subsections address specific implications for theory, education and training, clinical practice, and future research.

Implications for theory.

The CER theory (Skovholt & Jennings, 1999) asserts that master psychologists excel in the cognitive, emotional, and relational domains. This study specifically focused on addressing the emotional and relational domains of the CER model, as these domains are most closely

associated with emotional intelligence. The current study provided preliminary evidence that more clinical experiences and supervision predict higher scores of emotional intelligence. This finding supports the CER theory, and more specifically, may suggest that doctoral academic experiences enhance the emotional and relational domains. Furthermore, this result in the present study indicates that acquiring clinical experience leads to progression in these domains, which theoretically may lead to mastery, and perhaps expertise.

In terms of the proposed mediator model (Figure 2), findings did not support the initial hypotheses that general self-efficacy and psychotherapy-specific self-efficacy serve as the mechanisms through which supervised clinical experiences predict emotional intelligence. However, when independently examined, supervised clinical experiences predicted psychotherapy-specific self-efficacy and general self-efficacy, and psychotherapy-specific self-efficacy significantly predicted performance emotional intelligence while general self-efficacy did not. Non-significant mediator analysis findings suggest that academic experiences are more important in influencing scores of emotional intelligence and that it is not self-efficacy that explains the relationship between academic experiences and emotional intelligence. Nonetheless, the integrating and understanding emotions branches were significant mediators between academic experiences and total emotional intelligence scores, which means that hours of supervised clinical experience and years of graduate study affect total emotional intelligence scores through development in the integrating and understanding emotions branches. Furthermore, future researchers should attempt to examine other variables that may mediate the relationship between academic experiences and emotional intelligence, such as positive psychology factors like resiliency, subjective happiness, or psychological well-being.

Implications for education and training.

The results from the present study provide support for the importance of doctoral academic experiences in developing qualities that presumably predict performance in psychology. Findings revealed that emotional intelligence, a construct that is an important characteristic of master psychologists, can be developed through acquired supervision and clinical experiences. This finding suggests that it is important for professional psychology doctoral students to acquire significant experience working with clients, as well as meaningful supervision to review and process client cases. This finding is significant for APA graduate benchmark workgroups and doctoral graduate training programs as it indicates that doctoral academic experiences, such as clinical experience, supervision, and possibly program curriculum, are contributing to the development of emotional intelligence in psychology doctoral students. However, it is still possible for a much greater effect to occur and more emphasis should be placed on enhancing students' emotional intelligence range of functioning.

For example, graduate training programs could implement changes to their recommended program of study design, integrate emotional intelligence concepts into course curriculum, assist students in selecting practicum experiences that are likely to enhance emotional intelligence, and incorporate emotional intelligence principles into faculty supervision of doctoral students. In order to monitor whether these changes are influential, APA graduate benchmark workgroups and graduate training programs could routinely assess students' emotional intelligence development through the use of psychometrically valid emotional intelligence measures. This appears particularly important to APA, as their suggested evaluation of professional psychology doctoral students includes an examination of students' emotional and relational competencies.

Alternatively, although academic experiences significantly predicted emotional intelligence in this study, the difference in emotional intelligence between first year and fifth year students was slightly less than one standard deviation. From the ability model perspective, if emotional intelligence is a predictor of workplace and psychotherapy performance and doctoral programs are unable to considerably increase students' emotional intelligence scores during the doctoral program, this may mean that it is important for psychology doctoral programs to administer emotional intelligence measures during the recruitment process and only admit students who possess above average or superior emotional intelligence scores. The rationale for this suggestion is based on the notion that emotional intelligence is important in psychotherapy and if emotional intelligence cannot be developed due to its stable features, then programs would benefit from admitting students who are already sufficiently emotionally intelligent. First, they may find that these students develop psychotherapy skills much quicker and therefore much more attention can be given to identifying interventions that are helpful to clients. Second, these students may be more likely to become better psychotherapists in the future, and therefore it would be important to recruit students who are predisposed for mastery or expertise. Nonetheless, findings for this study suggest that emotional intelligence can be developed, so it is more likely that emotional intelligence is a competency. Therefore, it may be more important for programs to recruit students with a minimum threshold level of average emotional intelligence and to annually assess individual student's scores as they progress through their doctoral program.

Implications for practice.

If acquiring experience conducting individual or group therapy and participating in clinical supervision leads to higher scores of emotional intelligence, it can be inferred that

psychology trainees' psychotherapy skills are also being enhanced. Since psychotherapy requires the psychologist to regularly utilize all aspects of emotional intelligence, including the four branches of perceiving emotions, integrating emotions, understanding emotions, and managing emotions, measurable changes in emotional intelligence scores are likely a reflection of one's psychotherapy performance. Furthermore, since emotional intelligence is a determinant of performance (Bharti & Sidana, 2012; Cherniss, Extein, Goleman, & Weissberg, 2006; Kaplowitz, Safran, & Muran, 2011; Lopes et al., 2004; Rieck & Callahan, 2013; Rosete & Ciarrochi, 2005; Van Rooy & Viswesvaran, 2004) and leadership (Hayashi & Ewert, 2013), it is likely that psychology trainees' are becoming more proficient psychologists as a result of their clinical and supervision experiences. More specifically, increases in emotional intelligence may suggest that psychology doctoral students are enhancing specific competencies, such as establishing rapport, utilizing theory to inform practice, appropriately using affective skills and expressive skills to identify, reflect, and attend to clients' emotions, managing transference and countertransference, detecting and working with client defensiveness and incongruences, and implementing basic psychotherapy techniques, such as paraphrasing, summarizing, and active listening.

Implications for future research.

Prior to this study, only three studies examining psychologists and emotional intelligence were found in the literature. The current study provided a baseline for future research to be conducted on emotional intelligence and psychologists. For example, future researchers could improve the present study by assessing the quality of supervision received by doctoral student participants, type and quality of clinical experiences, and looking at the relationship between these variables, total number of supervised clinical experience hours, and emotional intelligence.

It is foreseeable that professional psychology doctoral students who obtain clinical experience hours in particular settings, such as crisis centers, hospitals, and veterans' healthcare facilities may have more opportunities to develop and refine emotional intelligence competencies. Similarly, if clinical environments are highly supportive, maintain an open-door policy between supervisors and doctoral students, and allow for opportunities to practice consultation skills, it is possible that these site qualities may enhance doctoral students' emotional intelligence.

Alternatively, it would be interesting to examine whether frequency and quality of supervision impacts one's emotional intelligence development, particularly if emotional intelligence concepts are integrated into the case conceptualization process and while exploring students' responses to clients (e.g., doctoral students' challenges, strengths, concerns, etc.). Researchers could investigate this relationship utilizing a descriptive design or could manipulate the supervision sessions through an experimental design. In an experimental design, researchers could compare the treatment group to the control group and attempt to identify whether supervision sessions can generate meaningful emotional intelligence abilities and impact emotional intelligence scores.

Future studies could also examine supervisors' evaluations of doctoral students' experiences in practicum and internship to assess whether there is an association between supervisors' evaluations of student psychotherapy performance and emotional intelligence scores. Additionally, similar to the present study, total number of clinical experience hours could also be included as a predictor variable. If findings reveal a significant relationship between higher emotional intelligence scores and positive evaluations of students' performance, this type of study could shed light on the type of doctoral student (i.e., characteristics) who is likely to develop advanced emotional intelligence competencies. Additionally, it would be

important to examine the relationship between supervisors' evaluations and emotional intelligence scores to search for evidence of concurrent validity that emotional intelligence predicts psychotherapy performance in psychology doctoral students. Looking at next steps, future studies should focus on whether emotional intelligence competencies acquired in a psychology doctoral program are related to high performance in psychotherapy, such as by examining supervisors' evaluations of students, client satisfaction surveys, objective client outcome data, or through observation and performance ratings of doctoral psychology students' psychotherapy sessions.

While the current study employed a sample of professional psychology doctoral students, which includes clinical, counseling, and school psychology doctoral students, future studies could compare these three types of doctoral programs to determine whether group differences exist in clinical hours, supervision hours, years of graduate study, and emotional intelligence scores. Likewise, researchers could look at group differences between doctoral students' enrolled in different phases, or years, of each type of professional psychology doctoral program.

To improve design and research methodology, an experimental design could be employed where the treatment group receives emotional intelligence instruction through a workshop series or during doctoral coursework. Previous research has found that emotional intelligence can successfully be taught (Dulewicz & Higgs, 2000; Mayer et al., 2002; Mayer et al., 1999; Langley, 2000; Marinez-Pons, 2000; Nelis, Quoidbach, Mikolajczak, & Hansenne, 2009; Slaski & Cartwright 2003; Satterfield & Hughes 2007; Ulutas & Omeroglu 2007; Watkin, 2000), and it is hypothesized that emotional intelligence could successfully be taught to psychology doctoral students, though this has not been tested within the field of psychology or with psychology

doctoral students. Researchers could evaluate the hypothesis that emotional intelligence scores increase as a result of purposeful emotional intelligence instruction.

It is conceivable that doctoral students' coursework impacts their development of emotional intelligence, as psychology curriculum provides many opportunities for students to improve in all four branches of emotional intelligence, but specifically the integrating, understanding, and managing emotions branches. However, does taking courses in a particular order enhance emotional intelligence development? An experimental design could investigate whether course sequencing affects emotional intelligence scores by assigning the treatment group to a particular program of study that is hypothesized to increase the acquisition of emotional intelligence competencies. Likewise, employing a descriptive design, future researchers might ask what course sequencing leads to higher emotional intelligence scores?

A particular limitation of the current study is its reliance on cross-sectional data. In the future, it would be worthwhile to conduct a longitudinal study to investigate whether increases in experience consistently predict emotional intelligence development. The results of the current study provide a baseline for the hypothesis that emotional intelligence scores would reliably increase over time as one gains more supervision and clinical experience. Finally, in order to gain a deeper understanding of how doctoral academic experiences impact emotional intelligence, qualitative data could be collected.

Since the current study did not derive significant mediator analysis results for the primary research questions, future studies should modify the model in the present study to examine other possible variables that may mediate the relationship between supervised clinical experiences and emotional intelligence. Some possible mediator variables may include empathy, the Big Five personality factors, traditional intelligence, motivation, self-awareness, and social-awareness.

However, it is possible that it would be more appropriate to assess moderator variables that function to strengthen the effect of supervised clinical experiences on emotional intelligence. This suggestion follows from reviewing the mean emotional intelligence score for first year psychology doctoral student participants in the present study ($M = 108.27$), which reveals that first year students were in the mid to high-average qualitative range of emotional intelligence. This finding suggests that students' enter psychology doctoral programs with considerable emotional intelligence. It seems important for future research to consider existing factors that students' possess before beginning a doctoral program and that may serve as moderators. For example, future studies could examine participants' IQ, previous work experiences, educational experiences, parental involvement and responsiveness, exploration and encouragement of emotional expression during childhood, social relationships, self-awareness, etc. to determine whether these pre-existing factors bolster the impact of acquired psychology doctoral program experience on emotional intelligence. Finally, other potential predictor variables that may further explain more variance in total emotional intelligence scores could include traditional intelligence, social awareness, self-awareness, motivation, empathy, curiosity, or parents' emotional intelligence scores.

Additionally, due to the non-significant mediator analysis for the second research question, researchers could attempt to duplicate the study with the use of a self-report measure of emotional intelligence to measure the outcome variable or an objective psychotherapy competence measure to measure the mediator variable. It would be interesting to see whether results would be significant if emotional intelligence scores were based on participants' self-appraisal of emotional intelligence competencies. It would also be of interest to examine whether academic experiences indirectly predict both general self-efficacy and psychotherapy-

specific self-efficacy through performance-based emotional intelligence. Researchers could examine this possible relationship by employing the performance-based emotional intelligence measure as a mediator variable. Likewise, researchers could employ a self-report emotional intelligence measure as a mediator variable in order to make comparisons among self-report and performance-based measures as the mechanism through which academic experiences affects self-efficacy.

Conclusion

Emotional intelligence is important for psychologists to possess, particularly when conducting psychotherapy. Psychologists who perform psychotherapy utilize all aspects of emotional intelligence, including the four branches of perceiving emotions, integrating emotions, understanding emotions, and managing emotions, which may mean that progressively increasing emotional intelligence scores are a reflection of one's increasing psychotherapy performance. This study provides support for the development and progression of emotional intelligence in psychology doctoral students who are immersed in and matriculating through a professional psychology doctoral program. Additionally, the finding that academic experiences predict emotional intelligence reveals the relationship between the field of psychology, clinical experiences, supervision, and emotional intelligence. Results support Easton, Martin, and Wilson's (2008) assertion that emotional intelligence can be developed as a result of one's didactic and clinical training experiences.

The findings contained within this study suggest that it is important for professional psychology doctoral students to acquire significant and consistent experience working with clients and supervisors, which are mediums through which emotional intelligence can be increased. Additionally, implementing deliberate emotional intelligence instruction into

psychology doctoral program courses and supervision may result in greater emotional intelligence range of functioning for psychology doctoral students. Since emotional intelligence competencies are related to psychotherapy skills, it would be worthwhile for APA graduate benchmark workgroups and graduate training programs to routinely assess students' emotional intelligence performance as an additional means of assessing students' emotional and relational competencies. In the future, it would be worthwhile to examine whether emotional intelligence instruction can increase emotional intelligence scores, if program of study design has an impact on emotional intelligence scores, whether specific elements of supervision affect emotional intelligence, and if psychology doctoral students with high scores of emotional intelligence demonstrate high psychotherapy performance.

APPENDIX A

INSTITUTIONAL REVIEW BOARD APPROVAL

The Florida State University
Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8673 · FAX (850) 644-4392

APPROVAL MEMORANDUM

Date: 10/2/2013

To: Elyssa Barbash

Dept.: EDUCATIONAL PSYCHOLOGY AND LEARNING SYSTEMS

From: Thomas L. Jacobson, Chair

Re: Use of Human Subjects in Research
Emotional Intelligence in Psychology Doctoral Students: A Cross Sectional Study

The application that you submitted to this office in regard to the use of human subjects in the proposal referenced above have been reviewed by the Secretary, the Chair, and one member of the Human Subjects Committee. Your project is determined to be Expedited per 45 CFR § 46.110(7) and has been approved by an expedited review process.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by 10/1/2014 you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.

You are advised that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report, in writing any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chair of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted

in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is FWA00000168/IRB number IRB00000446.

Cc: Steven Pfeiffer, Advisor
HSC No. 2013.11009

APPENDIX B

PILOT STUDY IRB APPROVAL

Office of the Vice President for Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8673 · FAX (850) 644-4392

APPROVAL MEMORANDUM

Date: 07/23/2013

To: Elyssa Barbash

Dept.: EDUCATIONAL PSYCHOLOGY AND LEARNING SYSTEMS

From: Thomas L. Jacobson, Chair

Re: Use of Human Subjects in Research

Emotional Intelligence in Masters' Students: A Cross Sectional Pilot Study

The application that you submitted to this office in regard to the use of human subjects in the proposal referenced above have been reviewed by the Secretary, the Chair, and two members of the Human Subjects Committee. Your project is determined to be Expedited per 45 CFR § 46.110(7) and has been approved by an expedited review process.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.

You are advised that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report, in writing any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the chairman of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is IRB00000446.

Cc: Steven Pfeiffer <spfeiffer@fsu.edu>, Advisor

APPENDIX C

INFORMED CONSENT

Cover Letter to Participants/Informed Consent

Dear Colleague,

Your participation in a dissertation study titled Emotional Intelligence in Psychology Doctoral Students: A Cross Sectional Study is requested. This research is being conducted by Elyssa Barbash, a doctoral candidate at Florida State University, supervised by Steven Pfeiffer, Ph.D., a professor at Florida State University, and is seeking information that will be useful for the mental health field. Psychologist talent development and performance is a complex and multi-faceted process that is affected by different variables. Research on the association between emotional intelligence, psychologists, and performance is a research area with both practical and training implications for individuals seeking careers or currently working in the psychology field.

Your consent to be a research participant is strictly voluntary, and should you decline to participate, decline to answer any of the survey questions, or choose to drop out at any time during the study, you may do so without consequences. The online survey includes a demographic questionnaire and 3 different electronic-based assessments about emotional intelligence and self-efficacy. The last assessment is contained on an external site. Please be sure to complete all measures. Completion of these forms should take 25-35 minutes. I would greatly appreciate your participation in this survey. If you agree to participate, please carefully read this entire form and visit the link below.

Information obtained from the study will remain confidential. Your responses to the consent, demographic form, and questionnaires will not be disclosed to the public and will only be seen by the principal investigator/faculty advisers. Data collected for this study will be retained in a secure manner until December 1st, 2019, after which time it will be destroyed. The results of the research study may be published, but your name will not be used. Your email address will be requested if you choose to participate in the random Starbucks gift card selection, though you will not be offered individual feedback regarding the assessments you choose to take today.

By participating in this study, you will be eligible to receive one of four \$10 Starbucks gift cards. In order to be included in the random gift card selection, you must complete the entire study, which includes the last measure contained on the external site. The risks of involvement in this study are minimal. The discomfort and risk reasonably expected by your participation in this project is that you may become more aware of personal characteristics that relate to emotional intelligence and self-efficacy, as well as your development of these variables. This awareness may cause mild anxiety. If you experience such a reaction after participating in this study, please contact your university's counseling center, a community mental health agency, or a private counseling center to discuss your situation. The study has been designed to ensure participant confidentiality.

Although there are no direct benefits to you, your participation in this study will make a valuable contribution to the current knowledge of psychologist variables that contribute to performance

and success within the field of psychology, as well as how psychology doctoral programs foster the growth of emotional intelligence and self-efficacy. Also, a possible benefit is having the opportunity to explore how your experience as a psychology doctoral student has impacted your emotional intelligence and self-efficacy beliefs.

If you have any questions about this research you are encouraged to e-mail Elyssa Barbash. This research is supervised by a faculty advisor, Steven Pfeiffer, Ph.D., who can be reached by email at spfeiffer@fsu.edu or by phone at 850-644-8796. This project has been reviewed according to Florida State University procedures governing human subjects research participation; if you have any questions regarding your rights as a participant in this research, you can contact FSU IRB at 2010 Levy Street, Research Building B, Suite 276, Tallahassee, FL 32306-2742, or 850-644-8633, or by email at humansubjects@magnet.fsu.edu.

If you are satisfied with the information provided and are willing to participate in this research, please indicate your voluntary consent by reading and selecting the appropriate response below. The results of this survey will be summarized in a report and sent to all interested participants, upon request. Thank you for your time and participation.

Elyssa Barbash, MA, LMHC, NCC
Doctoral Candidate
Combined Program in Counseling Psychology and School Psychology

Steven I. Pfeiffer, Ph.D.
Faculty Advisor
Dept. of Educational Psych. and Learning Systems
3210 Stone Building, PO Box 3064453
Tallahassee, Florida 32306-4453
spfeiffer@fsu.edu

APPENDIX D

DEMOGRAPHIC QUESTIONNAIRE

1. Please indicate your gender.

- Male
- Female

2. What is your age?

3. Please specify your race.

- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander
- White / Caucasian
- Biracial
- Hispanic/Latino

4. If you have earned a Masters degree, please indicate in what type of program you earned your masters degree:

- Clinical Psychology
- Counseling Psychology
- Mental Health Counseling
- Rehabilitation Counseling
- Marriage and Family Therapy
- Social Work
- School Counseling
- Other Psychology masters (non-clinical)
- Other masters degree (non-Psychology or Counseling)
- No masters degree

5. What type of psychology doctoral program are you enrolled in?

- Counseling Psychology
- Clinical Psychology
- School Psychology
- Combined (any combination of clinical, counseling, or school psychology)

6. How many years of graduate study (including masters degrees in Clinical Counseling, Counseling Psychology, Mental Health Counseling, Rehabilitation Counseling, Marriage and

Family Therapy, Community Counseling, Social Work [MSW], School Counseling, or any other degree in counseling) have you completed?

7. How many years of your doctoral program have you completed?

8. In total, how many hours of clinical experience do you have working with therapy clients?

9. In total, how many supervision hours have you completed?

APPENDIX E

MAYER-SALOVEY-CARUSO EMOTIONAL INTELLIGENCE TEST (MSCEIT)

The following are four sample items that reflect the types of questions asked on the MSCEIT (Mayer, Salovey, & Caruso, 2002):

a. Marjorie felt more and more ashamed, and began to feel worthless. She then felt

-
- i. Overwhelmed
 - ii. Depressed
 - iii. Ashamed
 - iv. Self-conscious
 - v. Jittery

b. A woman who felt secure and accepted later felt depressed. What happened in between?

- i. She received a compliment intended for someone else
- ii. She discovered her husband was cheating on her
- iii. A friend became ill
- iv. A package she mailed to a friend was delivered to the wrong person
- v. She was frustrated by bad job she did on a project

c. How much is the feeling below expressed by this picture? (display picture)

i. Sadness	1	2	3	4	5
ii. Anger	1	2	3	4	5
iii. Surprise	1	2	3	4	5
iv. Disgust	1	2	3	4	5
v. Excitement	1	2	3	4	5

d. Mara woke up feeling pretty well. She had slept well, felt well rested, and had no particular cares or concerns. How well would each action help preserve her mood?

Action 1: She got up and enjoyed the rest of the day.

- i. Very ineffective
- ii. Somewhat ineffective
- iii. Neutral
- iv. Somewhat effective
- v. Very effective

Action 2: Mara enjoyed the feeling and decided to think about and appreciate all the things that were going well for her.

- a. Very ineffective
- b. Somewhat ineffective
- c. Neutral
- d. Somewhat effective
- e. Very effective

Action 3: She decided it was best to ignore the feeling since it wouldn't last anyway.

- a. Very ineffective
- b. Somewhat ineffective
- c. Neutral
- d. Somewhat effective
- e. Very effective

Action 4: She used the positive feeling to call her mother, who had been depressed, and tried to cheer her up.

- a. Very ineffective
- b. Somewhat ineffective
- c. Neutral
- d. Somewhat effective
- e. Very effective

APPENDIX F

PERMISSION LETTER TO USE MSCEIT TEST ITEMS



Multi-Health Systems Inc.

Publishers and Distributors of Professional Assessment Materials

www.mhs.com

January 8, 2014

To Whom it May Concern,

This letter is to confirm that Elyssa H. Barbash, MA, LMHC, NCC, has been granted permission by Multi-Health Systems Inc, (MHS) to cite up to six (6) items from the Mayer-Salovey-Caruso Emotional Intelligence Test™ - MSCEIT™ in her dissertation at Florida State University.

Thank you,

Betty Mangos Multi Health Systems, Inc.

MHS In Canada: 3770 Victoria Park Ave., Toronto, ON M2H 3M6; (800) 268-6011 or 416-492-2627 **In US:** P.O. Box 950, North Tonawanda, NY 14120-0950; (800) 456-3003

International +1-416-492-2627

Fax +1-416-492-3343; Toll Free in Canada and the U.S. (888)540-4484

VISIT OUR WEBSITE AT <http://www.mhs.com>

APPENDIX G

COUNSELOR ACTIVITY SELF-EFFICACY SCALE (CASES)

General Instructions: The following questionnaire consists of three parts. Each part asks about your beliefs about your ability to perform various counselor behaviors or to deal with particular issues in counseling. Please provide your honest, candid responses that reflect your beliefs about your current capabilities, rather than how you would like to be seen or how you might look in the future. There are no right or wrong answers to the following questions. Using a dark pen or pencil, please circle the number that best reflects your response to each question.

Part I.

Instructions: Please indicate how confident you are in your ability to use each of the following helping skills effectively, over the next week, in counseling most clients.

No Confidence	Some Confidence				Complete Confidence				
0	1	2	3	4	5	6	7	8	9

How confident are you that you could use these general skills effectively with most clients over the next week?

- | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|
| 1. Attending (orient yourself physically toward the client) | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2. Listening (capture and understand the messages that clients communicate). | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 3. Restatements (repeat or rephrase what the client has said, in a way that is succinct, concrete, and clear). | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 4. Open questions (ask questions that help clients to clarify or explore their thoughts or feelings). | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 5. Reflection of feelings (repeat or rephrase the client's statements with an emphasis on his or her feelings). | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 6. Self-disclosure for exploration (reveal personal information about your history, credentials, or feelings). | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 7. Intentional silence (use silence to allow clients to get in touch with their thoughts or feelings). | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 8. Challenges (point out discrepancies, contradictions, defenses, or irrational beliefs of which the client is unaware or that he or she is unwilling or unable to change). | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 9. Interpretations (make statements that go beyond what the client has overtly stated and that give the client a new | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

way of seeing his or her behavior, thoughts, or feelings).

- 10. Self-disclosures for insight** (disclose *past* experiences in which you gained some personal insight) 0 1 2 3 4 5 6 7 8 9
- 11. Immediacy** (disclose *immediate* feelings you have about the client, the therapeutic relationship, or yourself in relation to the client).v 0 1 2 3 4 5 6 7 8 9
- 12. Information-giving** (teach or provide the client with data, opinions, facts, resources, or answers to questions). 0 1 2 3 4 5 6 7 8 9
- 13. Direct guidance** (give the client suggestions, directives, or advice that imply actions for the client to take). 0 1 2 3 4 5 6 7 8 9
- 14. Role-play and behavior rehearsal** (assist the client to role-play or rehearse behaviors in-session). 0 1 2 3 4 5 6 7 8 9
- 15. Homework** (develop and prescribe therapeutic assignments for clients to try out between sessions). 0 1 2 3 4 5 6 7 8 9

Part II.

Instructions: Please indicate how confident you are in your ability to do each of the following tasks effectively, over the next week, in counseling most clients.

No Confidence	Some Confidence				Complete Confidence				
0	1	2	3	4	5	6	7	8	9

How confident are you that you could do these specific tasks effectively with most clients over the next week?

- | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|
| 1. Keep sessions "on track" and focused. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2. Respond with the best helping skill, depending on what your client needs at a given moment. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 3. Help your client to explore his or her thoughts, feelings, and actions. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 4. Help your client to talk about his or her concerns at a "deep" level. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 5. Know what to do or say next after your client talks. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 6. Help your client set realistic counseling goals. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 7. Help your client to understand his or her thoughts, feelings, and actions. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 8. Build a clear conceptualization of your client and his or her counseling issues. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 9. Remain aware of your intentions (i.e., the purposes of your interventions) during sessions. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10. Help your client to decide what actions to take regarding his or her problems. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Part III.

Instructions: Please indicate how confident you are in your ability to work effectively, over the next week with each of the following client types, issues, or scenarios (By "work effectively," I am referring to your ability to develop successful treatment plans, to come up with polished in-session responses, to maintain your poise during difficult interactions, and, ultimately, to help the client resolve his or her issues.)

No Confidence	Some Confidence				Complete Confidence				
0	1	2	3	4	5	6	7	8	9

How confident are you that you could work effectively over the next week with a client who...

- | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|
| 1. is clinically depressed. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2. has been sexually abused. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 3. is suicidal. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 4. has experienced a recent traumatic life event (e.g., physical or psychological injury or abuse). | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 5. is extremely anxious. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 6. shows signs of severely disturbed thinking. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 7. you find sexually attractive. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 8. is dealing with issues that you personally find difficult to handle. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 9. has core values or beliefs that conflict with your own (e.g., regarding religion, gender roles). | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10. differs from you in a major way or ways (e.g., race, ethnicity, gender, age, social economic status). | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 11. is not "psychologically-minded" or introspective. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 12. is sexually attracted to you. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 13. you have negative reactions toward (e.g., boredom, annoyance). | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 14. is at an impasse in therapy. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 15. wants more from you than you are willing to give (e.g., in terms of frequency of contacts or problem-solving prescriptions). | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

16. demonstrates manipulative behaviors in-session.

0 1 2 3 4 5 6 7 8 9

APPENDIX H

THE GENERAL SELF-EFFICACY SCALE (GSE)

- 1 = Not at all true
- 2 = Hardly true
- 3 = Moderately true
- 4 = Exactly true

Directions: For each statement below, please read carefully and indicate how true each statement is for you by marking your answer according to the key.

	RATING			
1. I can always manage to solve difficult problems if I try hard enough.	1	2	3	4
2. If someone opposes me, I can find the means and ways to get what I want.	1	2	3	4
3. It is easy for me to stick to my aims and accomplish my goals.	1	2	3	4
4. I am confident that I could deal efficiently with unexpected events.	1	2	3	4
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.	1	2	3	4
6. I can solve most problems if I invest the necessary effort.	1	2	3	4
7. I can remain calm when facing difficulties because I can rely on my coping abilities.	1	2	3	4
8. When I am confronted with a problem, I can usually find several solutions.	1	2	3	4
9. If I am in trouble, I can usually think of a solution.	1	2	3	4
10. I can usually handle whatever comes my way.	1	2	3	4

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BIOGRAPHICAL SKETCH

Elyssa Hope Barbash was born in Long Island, New York. Her family moved to Plantation, Florida when she was two and a half years old and she was raised in South Florida. After graduating from high school in 2004, she attended the University of Central Florida (UCF) in Orlando and obtained a Bachelor of Arts in Interpersonal and Organizational Communication. While she was an undergraduate at UCF, she was a Lead Scholar, which is a leadership development program for students. In May 2010, Elyssa earned her Master's degree in Counselor Education/Mental Health Counseling from UCF. After graduating, she worked as a Substance Abuse Therapist at a community outpatient facility where she acquired clinical hours and supervision for licensure. Elyssa is a Licensed Mental Health Counselor in the state of Florida and is also recognized as a National Certified Counselor. She currently owns and operates a small, part-time private practice in Tallahassee, Florida.

Elyssa is currently a doctoral candidate in the combined doctoral program in Counseling Psychology and School Psychology at The Florida State University. This program is American Psychological Association (APA) accredited. During her graduate study, Elyssa gained a variety of experience with diverse clinical populations. She completed practica at Florida State University's Human Services Center, Employee Assistance Program, and Career Center, as well as the Behavioral Health Center at Tallahassee Memorial Hospital, the inpatient unit at Apalachee Center, and on both the forensic and civil units at Florida State Hospital. From these experiences, she has gained experience helping both traditional and non-traditional college students, providing crisis intervention, administering assessments, writing comprehensive psychological reports, and conducting individual, couples, and group psychotherapy. Similarly, she has had the opportunity to be the instructor of an undergraduate psychology course for six

semesters, the teaching assistant for both the graduate group therapy and psychology of the gifted courses, supervise other graduate trainees, and participate in research projects.

Elyssa will be completing her pre-doctoral psychology internship in Trauma Psychology at the James A. Haley Veterans' Affairs Hospital in Tampa, Florida. After graduating with her doctoral degree, Elyssa's long-term goal is to become a licensed psychologist providing psychotherapy services to individuals experiencing trauma, grief, or severe psychopathology, as well as conducting research within a hospital or medical setting. Elyssa is most passionate about the hospital setting population and is most interested in providing services to individuals presenting with trauma, grief, and severe and persistent mental illness.