Predictors of Counselor Self-Efficacy among Master's Level Counselor Trainees: Impact of Cohort versus Non-Cohort Educational Programs

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PREDICTORS OF COUNSELOR SELF-EFFICACY AMONG MASTER’S LEVEL COUNSELOR TRAINEES: IMPACT OF COHORT VERSUS NON-COHORT EDUCATIONAL PROGRAMS

by

Regina Lynn Meyer

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Doctor of Philosophy
Counselor Education and Counseling Psychology
Advisor: Eric Sauer, Ph.D.

Western Michigan University
Kalamazoo, Michigan
August 2012
THE GRADUATE COLLEGE
WESTERN MICHIGAN UNIVERSITY
KALAMAZOO, MICHIGAN

Date February 2, 2012

WE HEREBY APPROVE THE DISSERTATION SUBMITTED BY

Regina Lynn Meyer

ENTITLED Predictors of Counselor Self-Efficacy among Master's Level Counselor Trainees: Impact of Cohort versus Non-Cohort Educational Programs

AS PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF Doctor of Philosophy

Counselor Education and Counseling Psychology
(Department)

Counseling Psychology
(Program)

Dissertation Review Committee Chair

Dissertation Review Committee Member

Dissertation Review Committee Member

APPROVED

Dean of The Graduate College
Self-efficacy, a central component of Bandura’s social cognitive theory (SCT), is an important construct in the realm of therapist development and has been associated with client outcome. Researchers have found that some of the strongest predictors of counselor self-efficacy are level of experience, level of training, state anxiety, and trait anxiety. Missing from this body of literature, however, is an understanding of how the educational format of training (i.e., cohort versus non-cohort) impacts counselor self-efficacy. Because cohort membership has been associated with professional confidence and self-esteem, it was hypothesized that educational format would contribute significant variance to counselor self-efficacy scores. Furthermore, it was hypothesized that those enrolled in cohort programs would demonstrate significantly more counselor self-efficacy and significantly less state anxiety as compared to students enrolled in non-cohort programs. Finally, it was hypothesized there would be a significant relationship between practicum or “internship” status and counselor self-efficacy given that self-efficacy tends to increase with performance accomplishments.

One-hundred and sixty master’s level CACREP-approved counseling programs were randomly selected for inclusion in this study in addition to two programs at Western
Michigan University. Participants completed the Counselor Self-Estimate Inventory (COSE), the Counselor Activity Self-Efficacy Scales (CASES), the State-Trait Anxiety Inventory (STAI), and a background questionnaire. Of the 150 electronic surveys initiated, 104 met the inclusionary criteria. Hierarchical multiple regression analyses revealed that educational format did not contribute significant variance to counselor trainees’ self-efficacy scores above and beyond the variance explained by level of experience, level of training, state anxiety, and trait anxiety. ANOVA analyses revealed no difference in self-efficacy or state anxiety between students enrolled in cohort versus non-cohort educational formats. However, there was a significant relationship between practicum or “internship” status and self-efficacy as predicted. Level of experience, level of training, state anxiety, and trait anxiety accounted for 44.3% of the variance in COSE scores and 36.7% of the variance in CASES scores. The findings further support that counselor educators and supervisors must work to ensure students are able to reduce and/or control their anxiety, receive proper training, and acquire sufficient practicum experiences.
ACKNOWLEDGMENTS

Perhaps one of the most difficult sections to write may be this one. There are just no words to accurately and fully express my gratitude to those who have supported me throughout the dissertation process, but I will try despite what semantic limitations there are to express my feelings for those who have walked this journey with me. First, I would like to extend thanks to my committee members. Dr. Sauer, for letting me explore areas of research that fuel the fire of my passion for training, I am grateful. Your steady confidence in me and my ideas has allowed me to develop a sound sense of my efficacy as a researcher. Dr. Anderson, your expertise in statistics coupled with your ability to see the entire conceptual landscape has been invaluable. When I would get carried away with details and technicalities, you would gently steer me toward a broader and contextual understanding. Dr. Steward, I will always consider you my lifelong mentor. To you, I credit my desire, passion, and inspiration for training and supervision. Thank you for continuing to support me long after I finished my master’s program at Michigan State University.

My family has played an essential and pivotal role in the completion of this project. Mom and dad, thank you both so much for always believing in me, supporting me, and celebrating my accomplishments. I dedicate this dissertation to both of you because without your unconditional love, patience, and support, I could have never accomplished all that I have. To my dear sister, Jenni, thank you for your unspoken, steady support and tolerance of books and articles frequently scattered all over the couch, coffee table, and floor. More importantly, you helped me maintain balance and perspective by getting me out of the apartment when you knew enough was enough! To Jeremy, my fiancé, thank you for your unwavering and quiet patience, willingness to
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Regina Lynn Meyer
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CHAPTER I
STATEMENT OF THE PROBLEM

Introduction

For more than 30 years, self-efficacy theory has been used to understand the process of gaining self-confidence in particular domains of behavior (Bandura, 1977a, 1977b, 1982, 1986b, 1989a, 1989b). Bandura (1977b) formally defined self-efficacy as "the conviction that one can successfully execute the behavior required to produce the [desired] outcomes" (p. 193). Self-efficacy is a central component of Bandura’s social cognitive theory (SCT, 1986a; 1999) because he believed that self-efficacy is the cognitive mechanism underlying human behavior. More specifically, Bandura asserted that behavior is a result of cognitive representations of the task as well as one’s belief that he/she can successfully execute the relevant behavior (Bandura, 1977b). According to Bandura (1977a, 1982, 1989a), self-efficacy beliefs impact one’s thoughts, motivation, action, affect, and the environment one selects. For example, one’s level of self-efficacy impacts goal-setting, amount of expended effort, perseverance in the face of obstacles, approach and avoidance behavior, and emotional responses. Bandura (1977a, 1977b, 1982, 1989b) discussed four major sources of self-efficacy: performance accomplishments, vicarious experiences, verbal persuasion, and emotional arousal. Since the development of Bandura’s theory, self-efficacy has been studied in a multitude of domains, such as academic performance (e.g., Tuckman, 1990), managerial decision-making (e.g., Bandura & Jourden, 1991), and coping ability (Ozer & Bandura, 1990).
In 1982, Bandura turned his attention to counselors and found that self-efficacy increases performance levels and decreases anxiety levels in counselors. Since then, researchers have expanded upon Bandura’s research by investigating counselor self-efficacy. Counselor self-efficacy can be defined as “a counselor’s beliefs or judgments about his or her capacities to effectively counsel a client in the near future” (L. M. Larson & Daniels, 1998, p. 180). It is important to study counselor self-efficacy for at least two reasons. First, counselor self-efficacy has been recognized as a key component of therapist development for many years (e.g., Bischoff, Barton, Thober, & Hawley, 2002; Hackney & Goodyear, 1994; Kell & Mueller, 1996). In general, counselor trainees initially experience low self-efficacy and high levels of anxiety when providing therapy to clients (e.g., Ronnestad & Skovholt, 2003; Skovholt & Ronnestad, 1992; Stoltenberg & McNeill, 2010). These variables impact performance levels. Specifically, self-efficacy is positively associated with counseling performance, whereas anxiety is negatively correlated with counseling performance (e.g., Friedlander, Keller, Peca-Baker, & Olk, 1986; E. Johnson, Baker, Kiselica, & Thompson, 1989). Second, there is a significant and positive relation between counselor self-efficacy and client outcome (Orlinsky, Grawe, & Parks, 1994; Orlinsky & Howard, 1986).

Within this chapter, I will provide a theoretical and empirical overview of research related to counselor self-efficacy. Based on gaps in the literature, I will provide a rationale for the purpose of this study and identify the research question. I will also provide definitions of important terms and variables to be used in this study. Finally, I will briefly outline the proposed study, introduce the research hypotheses, and discuss the potential implications of this study.
Overview of Counselor Self-Efficacy Research

Self-efficacy is the central component of Bandura’s social cognitive theory (SCT) (Bandura, 1986a). SCT is a triadic reciprocal model in which personal factors (i.e., cognitive, affective, and biological events), behavioral patterns, and environmental events influence one another bidirectionally. In other words, people are not just passive “hosts of brain mechanisms” controlled by the environment; instead, people have agency, meaning they are able to think, feel, make decisions, set goals, plan, act, and reflect. Self-efficacy is the central mechanism through which individuals exercise agency. In order to produce desired effects, individuals must believe they are capable of doing so. Self-efficacy also impacts one’s thought patterns which can then enhance or undermine one’s performance (Bandura, 1999).

Given the centrality of self-efficacy to Bandura’s social cognitive theory, L. M. Larson and Daniels (1998) recommend that past and future studies regarding counselor self-efficacy be interpreted within the entire SCT framework. Specifically, they recommend that counselor self-efficacy should be related to the major components of SCT: person variables (stable counselor characteristics and personal agency variables), behaviors (counselor performance), and the environment (supervision/work environment). In a large review of the counseling self-efficacy literature, L. M. Larson and Daniels divided the findings into the above-mentioned categories.

In the realm of stable counselor characteristics (e.g., age, gender, personality, aptitude, achievement, ethnicity), most studies have found small non-significant correlations with counselor self-efficacy. There are two stable counselor characteristics, however, that have emerged as significant and positive correlates of counselor self-
As for personal agency variables, outcome expectancies [i.e., the belief that one’s efforts will result in desired outcomes (Bandura, 1977b)], affective arousal, and self-evaluation have been examined (L. M. Larson & Daniels, 1998). In general, significant positive correlations have been found between counselor self-efficacy and outcome expectancies (L. M. Larson et al., 1992; Sipps, Sugden, & Faiver, 1988). Anxiety is one example of emotional arousal and is the most examined variable in this domain (L. M. Larson & Daniels, 1998). According to Spielberger, Gorsuch, Lushene, Vagg, and Jacobs (1983), there are two types of anxiety: state anxiety (i.e., a temporary emotional reaction) and trait anxiety (i.e., stable individual differences in anxiety). In the area of counselor self-efficacy, researchers typically examine state anxiety given that counselor self-efficacy is operationalized as an immediate, situation-specific construct (L. M. Larson et al., 1992). Overall, significant negative correlations have been found between counselor self-efficacy and state anxiety (e.g., Barbee, Scherer, & Combs, 2003; Daniels, 1997; Friedlander et al., 1986; L. M. Larson et al., 1992). There have been some studies, however, that have examined the impact of trait anxiety on counselor self-efficacy. For example, L. M. Larson and colleagues (1992) and Kocarek (2001) both found significant negative correlations between trait anxiety and counselor self-efficacy. Finally, researchers report moderate to large positive correlations between counselor self-evaluation (i.e., a counselor’s judgment of his/her recent performance in session) and

In general, the findings regarding the relationship between counselor self-efficacy and counseling performance are mixed. For example, researchers have reported small to moderate positive correlations between counselor self-efficacy and counseling performance (Beverage, 1989; E. Johnson et al., 1989; L. M. Larson et al., 1992; Munson, Stadulis, & Munson, 1986a; Watson, 1992). Among first-year master’s level students, M. E. Johnson (1985) found considerable variation in the relationship between counselor self-efficacy and performance. This large variation may partially be explained by developmentally normal fluctuations in self-efficacy, interference of anxiety (E. Johnson et al., 1989), or beginning counselors’ difficulty in accurately assessing their performance (E. Johnson et al., 1989).

Beyond correlational data, some researchers have examined whether counselor self-efficacy can predict performance. L. M. Larson and colleagues (1992), Reese (1993) and Hanson (2007) all found that counselor self-efficacy is predictive of counseling performance. In contrast, E. Johnson and colleagues (1989), Watson (1992) and Sharpley and Ridgway (1993) did not find self-efficacy to be predictive of counseling performance, but it is important to note that they did not use published measures of counselor self-efficacy. Thus, the validity and reliability of the results may be questionable.

In SCT, the supervision/work environment includes two distinct parts: the subjective environment (i.e., the perceptions of the counselor, client, or supervisor) and the objective environment (i.e., what actually exists, such as semesters of received
supervision) (L. M. Larson & Daniels, 1998). In the subjective domain, there is some mixed research regarding the relationship between supervisory style (as perceived by the supervisee) and counselor self-efficacy. For example, Efstation, Patton, and Kardash (1990) and Strauss (1994) found that there is a stronger positive relationship between a task-oriented supervisory style and counselor self-efficacy than an attractive or interpersonally sensitive style. In contrast, however, Hanson (2007) found that the attractive and interpersonally sensitive styles were significantly and positively related to counselor self-efficacy, but the task-oriented style was not significantly related. These inconsistencies may exist because the authors used different measures of counselor self-efficacy, used supervisors with varying degrees of training and experience, and collected data from different sites. In the subjective work environment, counselors’ perceptions of collegial and administrative support are modestly related to their self-efficacy (L. M. Larson et al., 1996; Sutton & Fall, 1995). These same studies only found small relationships between counselor self-efficacy and amount of time spent on tasks, weekly client contact hours, client or problem difficulty, and family interference.

As mentioned directly above, L. M. Larson and colleagues (1996) and Sutton and Fall (1995) did not find a significant relationship between counselor self-efficacy and client or problem difficulty. It should be noted, however, that the participants in these studies were employed as counselors and no longer in training. Thus, they theoretically had more opportunities to experience performance accomplishments and recover from performance failures. For counselor trainees, however, seeing more challenging clients may have a stronger and more negative impact on their self-efficacy than on the self-efficacy of those who have graduated and are employed as counselors. Thus, it is worth
further investigating whether and how perceptions of client or problem difficulty impact counselor self-efficacy among trainees.

The objective components of the supervision/work environment can also be examined. L. M. Larson and colleagues (1992) found a significant positive correlation between counselor self-efficacy and semesters of received supervision. Similarly, Harris (2007) found that amount of clinical supervision was positively related to counselor self-efficacy, although the relationship was not significant. Other findings suggest that self-efficacy increases following various types of training. For example, Urbani and colleagues (2002) found that counselor self-efficacy significantly increased after a specific form of training called the skilled counselor training model. Counselor self-efficacy has also been found to increase after training in active listening (Levitt, 2001), after pre-service training (Barbee et al., 2003), and after role plays (L. M. Larson et al., 1999). Overall, there is a dearth of literature examining the impact of the supervision/work environment on counselor self-efficacy. Therefore, this study seeks to advance the literature in this area.

Predictors of Counselor Self-Efficacy

In addition to the above-mentioned body of literature, researchers have used regression analyses to study predictors of counselor self-efficacy. For the most part, the strongest correlates of counselor self-efficacy are also the strongest predictors of counselor self-efficacy. For example, Daniels (1997) found that prior self-efficacy strength, state anxiety, and positive feedback predicted 80% of the variance in counselor self-efficacy. Melchert and colleagues (1996) found that experience level and level of training together accounted for 43% of the variance in counselor self-efficacy. According
to Watson (1992), counselor-related coursework and counseling-related experience accounted for 35% of the variance in counselor self-efficacy. Efstation and colleagues (1990) reported that perceptions of supervisory style (i.e., task-orientation) by both the supervisor and the supervisee accounted for 14% of the variance in counselor self-efficacy, whereas Hanson (2007) found that the supervisory working alliance (as perceived by the supervisee) accounted for 31% of the variance in counselor self-efficacy.

Taking all of these findings together, it is clear that level of experience, level of training, anxiety, and perceptions of the supervision/work environment contribute significant variance to counselor self-efficacy. Applying the SCT framework, level of training and level of experience can be classified as stable counselor characteristics. Anxiety can be classified as a personal agency variable. Although counseling performance is a major component of SCT, it is beyond the scope of this current study. As mentioned, the last domain (i.e., the supervision/work environment) can be divided into subjective and objective components. I could not locate any research examining one part of the supervision/work environment: the effect of the educational format on counselor self-efficacy. One way to differentiate between educational formats is by cohort versus non-cohort. This study intends to advance the literature by illuminating how a central component of the educational environment impacts counselor self-efficacy. If it is discovered that the educational format is positively related to counselor self-efficacy, the next step would be to determine which components of that particular format are effective. Once this is discovered, there are possible implications for the structuring of training programs.
Cohort Educational Programs

A cohort can be defined as “a group of individuals [who] enter a program at the same time, proceed through all classes and academic requirements together, completing together, thus creating an atmosphere for learning in which a synergy is present and the learners’ effectiveness is increased” (Saltiel & Reynolds, 2001, p. 6). In a simpler definition, Lawrence (2002) defined a cohort as “a small group of learners who complete an entire program of study as a single unit” (p. 83). In other words, those admitted to a cohort educational program take their classes together and progress at the same rate. A non-cohort educational program can be defined as “a program where students select from an array of classes each semester on an individual basis” (Little, 2009, p. 14). Cohort programs typically admit a smaller number of applicants once per year as compared to non-cohort programs that typically admit a larger number of students several times annually.

There are several reasons why cohort membership may contribute to counselor self-efficacy. First, several benefits have been associated with cohort membership, such as closer interpersonal relationships (e.g., Maher, 1995), support and cohesion (e.g., Barnett & Muse, 1993; M. S. Hill, 1995; Norris & Barnett, 1994), exposure to a wider variety of perspectives (e.g., Witte & James, 1994), and risk-taking (Basom, Yerkes, Norris, & Barnett, 1996). The combination of these factors may serve to increase counselor self-efficacy by fostering an environment in which students feel safe to take risks and try out new behaviors, thereby increasing practice and performance accomplishments. Moreover, researchers have cited positive associations between cohort membership and professional confidence and self-esteem (e.g., Drago-Severson et al.,
2001; Norris & Barnett, 1994; Potthoff, Fredrickson, Batenhorst, & Tracy, 2001), two constructs related to self-efficacy (e.g., Dunnewold, 1982). In order to control for confounding variables related to the training environment, only students enrolled in Council for Accreditation of Counseling and Related Educational Programs (CACREP) were included in this study.

**Purpose of Study**

The purposes of this study are twofold: (a) to examine the construct of counselor self-efficacy within the SCT framework and (b) to build upon existing literature regarding the most significant predictors of counselor self-efficacy. As mentioned, the most significant predictors of counselor self-efficacy (i.e., level of experience, level of training, anxiety, and perceptions of the supervision/work environment) are also consistent with the strongest correlates of counselor self-efficacy. One component of the objective environment (i.e., what actually exists, such as semesters of received supervision) that has been not yet been addressed in prior research is the effect of the educational format on counselor self-efficacy. Adding this variable to the key findings regarding predictors of counselor self-efficacy, the research question for this study is: How much more variance in counselor self-efficacy can be predicted by type of educational program above and beyond level of experience, level of training, state anxiety, trait anxiety, and perception of practicum or “internship” difficulty for master’s level counselor trainees enrolled in Council for Accreditation of Counseling and Related Educational Programs (CACREP)?
Definition of Terms

The following definitions are provided to clarify the meaning of important terms and variables within this study.

*Cohort*: “a group of individuals [who] enter a program at the same time, proceed through all classes and academic requirements together, completing together, thus creating an atmosphere for learning in which a synergy is present and the learners’ effectiveness is increased” (Saltiel & Reynolds, 2001, p. 6).

*Cohort Educational Program*: term is used interchangeably with the term cohort for the purpose of this study.

*Counselor Self-Efficacy*: “a counselor’s beliefs or judgments about his or her capacities to effectively counsel a client in the near future” (L. M. Larson & Daniels, 1998, p. 180).

*Human Services*: “any programs or facilities for meeting basic health, welfare, and other needs of a society or group, as of the poor, sick, or elderly” (“Human Services,” 2010).

*Level of Experience*: years of paid and/or non-paid experience participants have had in the human services field prior to initial enrollment in one’s current master’s program. Response choices will be limited to the following: (a) none, (b) 1-5 years, (c) 6-10 years, and (d) 11+ years, which is consistent with Tang and colleagues’ (2004) operationalization of experience level.

*Level of Training*: number of course credits completed (i.e., final grade has been assigned) in one’s current master’s program. Level of training will be assessed by the following forced choice categories: (a) 0-12 credits, (b) 13-24 credits, (c) 25-36 credits, (d) 37-48 credits, (e) 49-60 credits, and (f) 61+ credits.
**Non-Cohort Educational Program:** “a program where students select from an array of classes each semester on an individual basis” (Little, 2009, p. 14).

**Perceived difficulty of practicum or “internship” placement:** a measure of the subjective supervision/work environment; how challenging participants rate their current or most recent practicum or “internship” placement on a scale of 1 (not difficult) to 5 (very difficult).

**State Anxiety:** a temporary emotional reaction involving tension, nervousness, worry, and activation of the autonomic nervous system (Spielberger et al., 1983).

**Trait Anxiety:** “relatively stable individual differences in anxiety proneness” (Spielberger et al., 1983, p. 5).

**Brief Overview of Study**

A list of all CACREP programs was directly obtained from the CACREP website (http://www.cacrep.org/directory/directory.cfm). (Online counseling programs were not included in this study). Only CACREP programs were selected to participate in this study in order to reduce extraneous variables associated with degree and training requirements. The following programs were eligible for inclusion in this study: clinical mental health counseling; college counseling; community counseling; marital, couple, and family counseling; and mental health counseling. These programs were selected because they typically maintain a “therapy” focus, whereas other programs, such as school counseling for example, may be structured differently.

Using a randomization procedure in the Statistical Package for the Social Sciences (SPSS), I randomly selected 40 CACREP approved programs. Initially, I wanted to collect information from program coordinators (e.g., type of educational
format, time to degree), but was unable to do so due to a very low response rate. Thus, I asked for and received permission from the Human Subjects Institutional Review Board (HSIRB) to bypass this step. Instead, I received permission to send an email to the program contacts informing them that their program had been selected for potential inclusion in this study. A brief description of the study was provided and the program contacts were encouraged to contact either the student investigator or the primary investigator with any questions. Within the email, there was also a web-based survey link and the program contacts were encouraged to forward this link to their master’s level students enrolled in the selected program(s).

In order to ensure an adequate number of responses, I received permission from the HSIRB to randomly select another 40 programs for inclusion in this study. Because I only had 26 completed surveys after two months, I asked for and received permission from the HSIRB to randomly select another 80 programs for inclusion. Throughout the course of data collection, several of the program contacts informed me it would be more efficient to send the call for participants to department chairs. Thus, for the last randomly selected 80 programs, the HSIRB allowed me to send the call for participants to the department chairs instead of the program contacts. In addition to the 160 randomly selected programs, two CACREP approved programs at the researcher’s home institution were invited to participate. For those students who agreed to participate, they completed a background questionnaire, two measures of counselor self-efficacy, and one measure of anxiety. After one month had elapsed, a reminder email containing the web-based survey link was sent to each program contact or department chair for redistribution to the students.
After the data was collected, descriptive statistics were calculated for each group (i.e., cohort and non-cohort) as well as for the entire sample. Cohort and non-cohort programs were compared on demographic variables, state anxiety, trait anxiety, counselor self-efficacy, level of experience, level of training, practicum or “internship” status, and perceived difficulty of practicum or “internship” placement. In addition, two hierarchical multiple regression analyses were run to determine whether educational format explains additional variance in counselor self-efficacy after level of experience, level of training, state anxiety, trait anxiety, and perceived difficulty of practicum or “internship” placement had been entered into the regression equation(s).

**Hypotheses**

Hypotheses for this study are based on empirical findings, logic, and theoretical assumptions. First, the objective environment (i.e., what actually exists, such as semesters of received supervision) is related to counselor self-efficacy (e.g., L. M. Larson et al., 1999; L. M. Larson et al., 1992; Urbani et al., 2002). Second, cohort membership is associated with closer interpersonal relationships (e.g., Maher, 1995), support and cohesion (e.g., M. S. Hill, 1995), exposure to a wider variety of perspectives (e.g., Witte & James, 1994), and risk-taking (Basom et al., 1996). These factors may combine to increase counselor self-efficacy by fostering an environment in which students feel safe to try out new behaviors, take risks, and increase their practice and performance accomplishments. Performance accomplishments, according to Bandura’s theory of self-efficacy (1977b), are a major source of counselor self-efficacy. Third, researchers have found positive correlations between cohort membership and professional confidence and self-esteem (e.g., Drago-Severson et al., 2001; Norris & Barnett, 1994; Potthoff et al., 14
two constructs related to self-efficacy (e.g., Dunnewold, 1982). Taking these important points together, it is hypothesized that educational format will contribute significant variance to counselor trainees’ self-efficacy scores above and beyond the variance explained by level of experience, level of training, state anxiety, trait anxiety, and perceived difficulty of practicum or “internship” placement (Hypothesis 1). More specifically, those enrolled in cohort educational programs will demonstrate significantly higher counselor self-efficacy scores as compared to those enrolled in non-cohort educational programs (Hypothesis 1a).

Given the negative correlation between level of state anxiety and counselor self-efficacy found in previous literature (e.g., Barbee et al., 2003; Friedlander et al., 1986), it seems plausible that those enrolled in cohort educational programs will have significantly lower levels of state anxiety as compared to those enrolled in non-cohort educational programs (Hypothesis 2). Finally, it is hypothesized that there will be a significant correlation between practicum or “internship” status and counselor self-efficacy (Hypothesis 3). Bandura (1977b) found that self-efficacy increases with experience; thus, it seems logical that those who are more advanced in their practica sequence will report higher levels of self-efficacy.

**Summary of Hypotheses**

H 1: Educational format will contribute significant variance to counselor trainees’ self-efficacy scores above and beyond the variance explained by level of experience, level of training, state anxiety, trait anxiety, and perceived difficulty of practicum or “internship” placement.
H 1a: Counselor trainees enrolled in cohort educational programs will demonstrate significantly higher counselor self-efficacy scores as compared to those enrolled in non-cohort educational programs.

H 2: Counselor trainees enrolled in cohort educational programs will demonstrate significantly lower levels of state anxiety as compared to those enrolled in non-cohort educational programs.

H 3: There will be a significant correlation between practicum or "internship" status and counselor self-efficacy.

Potential Implications of this Study

It is hoped that the results of this study will have implications for training and future research. Given that a primary goal of counselor training is to produce effective practitioners capable of improving the quality of their clients’ lives, it is important to study constructs known to impact therapist development. For many years, researchers have known that counselor self-efficacy is one of those constructs (e.g., Bischoff et al., 2002). As mentioned before, increasing students’ counselor self-efficacy is important because counselor self-efficacy is also related to counselor performance (e.g., L. M. Larson et al., 1992; Munson et al., 1986a; Munson et al., 1986b; Watson, 1992) as well as counseling outcome (Orlinsky et al., 1994; Orlinsky & Howard, 1986).

This study may provide further evidence that level of experience, level of training, anxiety, and perceptions of the supervision/work environment are significant predictors of counselor self-efficacy. This finding would re-affirm previous findings based on theoretical predictions asserted by Bandura (1977b) and L. M. Larson and Daniels (1998). Furthermore, given the lack of research regarding the impact of educational...
format on counselor self-efficacy, this research may advance the field’s understanding of this environmental component.

If it is determined that the cohort educational format is positively associated with counselor self-efficacy, future research may then explore the components of cohort formats that are responsible for this. For example, do students learn better in communities characterized by mutual support and cohesiveness? What impact do risk-taking, experimentation, and reflection have on self-efficacy? How can faculty structure learning activities to optimize the individual development of trainees? Once some of these questions have been answered, master’s level training programs could incorporate effective aspects of the cohort format into their programs. On a larger level, one question that must be answered is whether there is a big enough difference between the self-efficacy and performance of cohort students and non-cohort students to influence university administrators to restructure their programs. What would this mean for the program, the department, and the university? In an era where programs are expanding to increase revenue and smaller programs are being eliminated, what does this mean for the field of counseling? What implications may this have on counselors, their clients, and their agencies? These are all very important questions that must be answered in order to improve counselor training and ensure client welfare.
CHAPTER II
LITERATURE REVIEW

Introduction

Given that a primary goal of counselor training is to produce effective practitioners, research related to the training of master’s level counselors is a timely and relevant source of information for counselor educators and supervisors. For many years, counselor educators and supervisors have recognized the importance of self-efficacy, or confidence, as a key component of therapist development (e.g., Bischoff et al., 2002; Hackney & Goodyear, 1994; Kell & Mueller, 1966). In fact, research suggests that beginning counselor trainees have low confidence in their counseling ability and high levels of anxiety (e.g., Ronnestad & Skovholt, 2003; Skovholt & Ronnestad, 1992; Stoltenberg & McNeill, 2010). According to Bradley and Fiorini (1999), it is very important that counselor trainees become confident that the delivery of their skills will benefit clients. This is important because self-efficacy is related to therapeutic outcome. For example, one large review of the literature found that client outcome was positively related to therapist self-confidence in two-thirds of all the studies examined (Orlinsky & Howard, 1986). In contrast, therapist “unsureness” was never positively related to outcome. In a later review, 59% of 27 studies exploring therapist confidence demonstrated a significant positive relation to outcome (Orlinsky et al., 1994). Furthermore, clients who perceive higher levels of counselor self-confidence tend to see their counselors as more effective as compared to counselors with lower self-confidence (Maskin, 1994).
The purpose of this chapter is to present literature related to counselor self-efficacy and the other variables that will be examined in this study. The literature review will be divided into several sections. First, I will review conceptual and empirical research pertaining to self-efficacy. This section will be followed by a review of the literature concerning the correlates and predictors of counselor self-efficacy. Next, I will review literature pertaining to cohort educational programs. Finally, because this study will be limited to students enrolled in programs accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP), I will provide a brief overview of CACREP.

Self-Efficacy

Self-efficacy theory has been used to understand the process of gaining self-confidence in particular domains of behavior, such as career choice, achievement, and coping ability (Bandura, 1977a, 1977b, 1982, 1986b, 1989a, 1989b) and is a central component of Bandura's social cognitive theory (SCT, 1986a; 1999). Bandura (1977b) argued that behavior is not only a result of positive or negative reinforcement, but it is also a result of cognitive representations of direct, vicarious, and symbolic sources of information. For example, human behavior is largely developed through modeling. After observing others perform a specific task, individuals form a symbolic representation of that behavior, and at a later occasion, they can access that representation as a guide for action. Furthermore, response patterns learned through observation can be further refined through self-correction based on performance feedback. Bandura (1977b) also argued that motivation is rooted in cognitive activities because the cognitive representation of future consequences can generate current motivators of behavior.
The cognitive mechanism believed to be underlying human behavior is self-efficacy, which is defined as "the conviction that one can successfully execute the behavior required to produce the [desired] outcomes" (Bandura, 1977b, p. 193). Bandura (1989a) stated, "Among the mechanisms of personal agency, none is more central or pervasive than people's beliefs about their capabilities to exercise control over events that affect their lives" (p. 1175). In other words, successful performance of any behavior requires not only knowledge and skills, but belief that one has the ability to successfully perform the relevant behavior (i.e., self-efficacy). In addition, individuals must also believe that performance of the relevant behavior will lead to a particular outcome (i.e., outcome expectations). Thus, knowledge and skills are necessary, but not sufficient, for accomplished performances (Bandura, 1977b, 1982). Bandura (1977b) proposed that self-efficacy expectations are better predictors of behavior than outcome expectations because outcome expectations are based on efficacy expectations.

Bandura stated that self-efficacy beliefs impact one's thoughts, motivation, action, affect, and the environment one selects (1977a, 1982, 1989a). In the cognitive realm, self-efficacy impacts personal goal-setting as well as outcome expectations. More specifically, those with higher self-efficacy set higher goals and have a firmer commitment to those goals as compared to those with lower self-efficacy. Furthermore, those with higher self-efficacy tend to visualize successful outcomes, whereas those with lower levels of self-efficacy visualize failure scenarios. Self-efficacy beliefs also impact one's level of motivation. Those with higher self-efficacy put more effort into an endeavor, persist for longer periods of time in the face of obstacles and aversive situations, and recover more quickly from setbacks and frustrations. The stronger the
perceived self-efficacy, the more active one’s efforts will be and the more likely he/she will succeed (Bandura, 1977b, 1982, 1989a). In the affective realm, the strength of one’s self-efficacy will affect whether he/she tries to cope with a given situation. Specifically, people avoid threatening situations they believe exceed their coping skills, but will approach tasks they determine to be within their range of coping. Furthermore, perceived coping inefficacy is associated with depression, anxiety, fear, and subjective distress (Bandura, 1989b). Finally, self-efficacy beliefs can impact environmental selection. In other words, people tend to select environments that are consistent with their perceived ability to cope with associated demands (e.g., a person who is naturally good with numbers may choose to study accounting). The selected environment then serves to strengthen the individual’s sense of self-efficacy, competencies, values, and interests (Bandura, 1989a). In addition to these above-mentioned factors, it is important to note that self-efficacy expectations also vary along three dimensions: magnitude, generality, and strength. Magnitude of self-efficacy is affected by task difficulty; generality by circumscription of the task; and strength by degree of success in accomplishing any given task (Bandura, 1977b).

Bandura (1982) also discussed the interaction between self-efficacy and outcome expectations in terms of emotional reactions and behaviors. If an individual has high self-efficacy and high outcome expectations, he/she will feel assured and optimistic and will be more likely to engage in action. If an individual has high self-efficacy expectations but low outcome expectations, he/she may complain or try to change the environment. Resignation and apathy result when an individual has both low self-efficacy expectations and outcome expectations. Finally, self-devaluation and despondency may be the
unfortunate result of low self-efficacy expectations combined with high outcome expectations.

Bandura (1977a, 1977b, 1982, 1989b) theorized that self-efficacy develops from four sources: performance accomplishments, vicarious experiences, verbal persuasion, and emotional arousal. Performance accomplishments are based on personal mastery experiences of success in a particular domain. Successes raise mastery expectations, whereas repeated failures lower them, especially if failures occur early in the development of a new skill. Once strong efficacy expectations are developed, however, subsequent failures carry less impact.

Vicarious experiences can be fostered by the observation and/or imitation of relevant models. Given that these require social comparison between self and other(s), they are a less dependable source of information about one’s capacities. Moreover, the characteristics of the model (e.g., age, expertness, similarity to the observer) can impact the degree of one’s perceived self-efficacy. For example, a child who observes another child riding a tricycle will have more self-efficacy in this domain than if he/she would have observed an adult riding a tricycle.

Verbal persuasion is widely used for its ease and ready availability. Suggestion, support, and encouragement are used to lead people to believe that they can cope successfully with the relevant task. Efficacy expectations induced in this manner tend to be weaker due to the lack of an experiential component. Furthermore, this source of self-efficacy can be easily extinguished by disconfirming experiences. The impact of verbal persuasion may depend on the following: perceived credibility, prestige, trustworthiness, expertise, and assuredness of the persuaders.
Finally, people rely partly on their state of emotional or physiological arousal to make judgments regarding their ability to perform specific tasks. High arousal (e.g., anxiety) is negatively correlated with performance, and people are more likely to expect success when they are not experiencing high levels of emotional arousal. If one is able to perform elements of a task despite high levels of emotional arousal, it is possible to gradually increase self-efficacy through successive performance accomplishments. In addition to behavioral interventions, cognitive interventions can also be used to increase one’s sense of personal control over the aversive situation, and thus self-efficacy.

Self-efficacy theory has been studied in multiple domains to determine the predictive generality of the theory. According to Bandura (1982), perceived self-efficacy predicts degree of change in diverse forms of social behavior, such as phobic dysfunctions, stress reactions, physical stamina, addictive behavior, achievement strivings, and career choice and development. Furthermore, self-efficacy is related to the effectiveness of weight loss programs, smoking cessation programs, and alcohol treatment programs. Self-efficacy has also been studied in several areas, such as: AIDS prevention (e.g., O’Leary, 1992), academic performance (e.g., Tuckman, 1990), depression (e.g., Davis-Berman, 1990), job burnout (Meier, 1983), maternal competence (Teti & Gelfand, 1991), athletic performance (Gould, Hodge, Peterson, & Giannini, 1989), managerial decision-making (e.g., Bandura & Jourden, 1991), physiological reactions (e.g., Bandura, Reese, & Adams, 1982), job satisfaction and performance (Saks, 1995), and coping ability (Ozer & Bandura, 1990). Of upmost import to this study is Bandura’s (1982) finding that self-efficacy increases performance levels and decreases
anxiety levels in counselors. Counselor self-efficacy has been studied since the 1980s and will be discussed in the following section.

**Counselor Self-Efficacy**

Counselor self-efficacy can be defined as “a counselor’s beliefs or judgments about his or her capacities to effectively counsel a client in the near future” (L. M. Larson & Daniels, 1998, p. 180). Given that most counselor training programs incorporate all four sources of self-efficacy (i.e., performance accomplishments, vicarious experiences, verbal persuasion, and emotional arousal), Bandura’s theory would predict that counselors develop confidence in their professional abilities as they gain training (e.g., through coursework and observation of counseling role plays) and experience (e.g., pre-practicum, practicum, and internship placements). Because counselor self-efficacy is only one crucial construct embedded in Bandura’s social cognitive theory (SCT, 1986a; 1999), L. M. Larson and Daniels (1998) suggest that past and future studies regarding counselor self-efficacy be interpreted within this wider framework. Specifically, counselor self-efficacy should be related to the major components of SCT, namely person variables (stable counselor characteristics and personal agency), behavior (counselor performance), and the environment (supervision/work environment). Following will be a review of the counselor self-efficacy literature situated in the SCT framework.

**Review of the Literature**

In the following section, I will review several studies regarding counselor self-efficacy arranged according to the components of SCT: stable counselor characteristics and personal agency, counselor performance, and supervision/work environment. Inevitably, some studies fit into more than one category, especially when several
variables are examined. In these cases, I made an effort to classify them based on the main findings of each research study. At the end of this section, I will provide a synthesis of the literature.

**Stable counselor characteristics.** Overall, studies have revealed mostly small and non-significant relationships between stable counselor characteristics and counselor self-efficacy (L. M. Larson & Daniels, 1998). For example, small non-significant relationships have been reported between counselor self-efficacy and personality, aptitude, achievement, gender, and ethnicity (L. M. Larson et al., 1992). A small yet significant relationship in the positive direction was found between counselor self-efficacy and social desirability, whereas large significant relationships were found between counselor self-efficacy and problem-solving efficacy and between counselor self-efficacy and self-concept (L. M. Larson et al., 1992). It makes sense that self-efficacy would increase with these latter variables given that they are conceptually related to self-efficacy.

In contrast to the above-mentioned findings, researchers have *consistently* found significant positive correlations between counselor self-efficacy and two stable counselor characteristics (i.e., level of training and level of experience). In 1988, a quasi-experimental design was used to investigate the relationship between graduate training and counselor trainees’ self-efficacy in using basic counseling skills (Sipps et al.). Seventy-eight trainees in graduate level programs (counseling psychology, community counseling, guidance and counseling, and marriage and family counseling) from two Midwestern universities participated in this study. They were divided into groups based on year in program: 1<sup>st</sup> year; 2<sup>nd</sup> year; 3<sup>rd</sup> year; and 4<sup>th</sup> year.
The researchers hypothesized that there would be a curvilinear relationship between level of training and self-efficacy expectations. (Self-efficacy expectations were measured by participants' ratings on a Likert-type scale ranging from 0 to 100). Specifically, the authors predicted that 1st year students would have relatively high levels of self-efficacy due to inflated confidence in their lay helper skills and inaccurate perceptions of the difficulties inherent in the therapeutic process. Second-year students were expected to have lower self-efficacy due to their failed attempts to use lay skills effectively in therapy. Third-year students were expected to have higher levels of self-efficacy because of their opportunities for performance accomplishments. Finally, it was predicted that 4th year students would have the highest self-efficacy scores.

The results revealed main effects for amount of graduate training on self-efficacy and outcome expectations. Consistent with predictions, 2nd year students showed the lowest levels of self-efficacy expectations. Furthermore, 1st year students showed significantly lower self-efficacy expectations than 3rd and 4th year students. Outcome expectations for 4th year students were significantly higher than for 1st and 2nd year students. The researchers suggested that performance accomplishments may be the reason self-efficacy and outcome expectations increased with training, as Bandura would have predicted.

An experimental study (E. Johnson et al., 1989) investigated the relationship between counseling self-efficacy and training in a natural training context (i.e., a graduate class in counseling skills) over an 8-week time period. The authors tested the following hypotheses: (a) self-efficacy will increase during training and (b) after skill training, self-
efficacy will correlate significantly with efficacy related to imagining future work with a client.

The 50 master's degree candidates who participated in this study were currently enrolled in a counselor pre-practicum class. Self-efficacy was measured by the Counselor Self-Efficacy Scale (designed by the authors) at five points: at pretraining, after training in basic skills, after the first role-play, after training in intermediate skills, and after the second role-play. The researchers discovered that the self-efficacy of all participants (regardless of initial self-efficacy scores) significantly increased over time. It was also discovered that posttraining self-efficacy correlated significantly with efficacy related to imagining a future client. These findings are consistent with the study discussed above conducted by Sipps and colleagues (1988).

Within a large study aimed at developing a reliable and valid instrument for the measurement of counselor self-efficacy (i.e., Counselor Self-Estimate Inventory; COSE), L. M. Larson and colleagues (1992) conducted two small studies that revealed the correlations between level of experience, level of training, and counselor self-efficacy. The first study investigated developmental changes in self-efficacy across training and years of counseling experience. The second study investigated the changes in self-efficacy over one semester of practicum. Each of these studies will be reviewed in more detail below.

The first study examined the differences in self-efficacy based on level of educational training (BA, MA, or Ph.D.) and years of counseling experience. A total of 321 participants completed this study. The authors predicted that master's level counselors and doctoral level counseling psychologists would have higher levels of self-
efficacy due to more performance accomplishments, vicarious experiences, verbal persuasion, and less emotional arousal as compared to beginning counselor trainees. Results revealed significant main effects for both level of training and years of experience (L. M. Larson et al., 1992). In other words, as training and experience increase, so does counselor self-efficacy.

The second study included 10 master's practicum students and was designed to investigate changes in self-efficacy across one semester. Minimum requirements were: completing 15 client sessions, observing 15 live sessions, and having weekly individual and group supervision. Due to the small sample size and low power, a repeated measures ANOVA could not be conducted. Instead, means and standard deviations were compared. Overall, results indicated that COSE scores, a measure of counselor self-efficacy, increased with training (L. M. Larson et al., 1992).

Following the study by L. M. Larson and colleagues (1992), an unpublished doctoral dissertation used the COSE to examine differences in counseling self-efficacy among 61 master's level counselor trainees either completing introductory coursework or completing their first counseling practicum (Rushlau, 1998). Although number of credit hours completed and client contact hours were not significantly related to counselor self-efficacy, trainees enrolled in practicum had significantly higher self-efficacy scores than those completing general coursework. This finding adds support to L. M. Larson and colleagues' (1992) finding that self-efficacy increases with practicum counseling experience.

Melchert and colleagues (1996) developed and tested another instrument to measure counselor self-efficacy: the Counselor Self-Efficacy Scale (CSES). As part of
this study, the authors were interested in discovering whether counselor self-efficacy increases with experience and training as predicted by Bandura’s self-efficacy theory. The sample was composed of 138 participants; some were students from a master’s level counseling program and others were licensed psychologists working at the counseling center of the same university. In a multiple regression of CSES scores with level of training and amount of clinical experience, it was discovered that level of training and amount of experience together accounted for 43% of the variance in CSES scores. Somewhat similar to this finding, Martin and colleagues (2004) discovered that 33% of the variability in counselor self-efficacy could be explained by level of experience. In other words, level of training and level of experience both appear to contribute large amounts of variance to counselor self-efficacy scores.

Another study examining the relationship between several variables and counselor self-efficacy was conducted by Tang and colleagues (2004). The researchers examined whether number of courses taken, prior work experience, and number of internship hours have a positive relationship with counselor self-efficacy. One-hundred-sixteen participants were recruited from six different counselor education programs. Counselor self-efficacy was measured with the Self-Efficacy Inventory (S-EI; Friedlander & Snyder, 1983). An overall examination of the data found that total counselor self-efficacy was significantly and positively related to coursework, internship hours, and clinical instruction. This study adds to the literature that supports the positive relationship between training, experience, and counselor self-efficacy.

Finally, in 2009, Lent and colleagues examined the incidence, size, direction, and change in perceived counselor self-efficacy among 98 master’s level therapists enrolled
in their first counseling practicum. Participants were asked to write out their answers to several questions regarding self-efficacy immediately after seeing their clients. The authors argued that despite studies supporting change in counselor self-efficacy over time and those that point to specific antecedents, many studies are limited by the use of mock counseling sessions. Furthermore, these studies have assessed general counseling self-efficacy versus client-specific self-efficacy. Thus, Lent and colleagues investigated the naturally occurring process of change in client-specific counselor self-efficacy for trainees over a period of five sessions with real clients. Furthermore, trainees were asked to explain the reasons for any changes in their perceived self-efficacy.

Results revealed that two-thirds of the participants reported a change in their self-efficacy at each of their first three sessions. About half of the sample reported a change in their self-efficacy at each of the final two sessions. Approximately 67%-79% of these individuals indicated that the change was in the positive direction. Only a small proportion (7%-15%) experienced a reduction in self-efficacy across sessions. In a somewhat related study, Lent and colleagues (2006) found that client-specific counselor self-efficacy significantly increased over the course of four counseling sessions. Taking all of the literature discussed above, it is clear that counselor self-efficacy increases with training and experience, just as Bandura’s theory predicts.

Personal agency. In this domain, outcome expectancies, affective arousal, and self-evaluation have been examined (L. M. Larson & Daniels, 1998). Both Sipps and colleagues (1988) and L. M. Larson and colleagues (1992) found significant positive correlations between counselor self-efficacy and outcome expectancies. As for affective arousal (i.e., conceptualized as anxiety), Barbee and colleagues (2003), Daniels (1997),
Friedlander and colleagues (1986), and L. M. Larson and colleagues (1992) found a significant negative relationship between state anxiety and counselor self-efficacy. L. M. Larson and colleagues (1992) and Kocarek (2001) found a significant negative relationship between trait anxiety and counselor self-efficacy. As for the relationship between counselor self-efficacy and counselor self-evaluation (i.e., a counselor’s judgment of his/her recent performance in session), researchers report moderate to large positive correlations (Beverage, 1989; Daniels, 1997; L. M. Larson et al., 1996; L. M. Larson et al., 1992).

Performance. Overall, the findings regarding the relationship between counselor self-efficacy and counseling performance are mixed. After I present the findings in this domain, I will attempt to make sense of the discrepancies. Counseling performance has been measured in two ways: by trained raters and by supervisors of counselor trainees. Among the studies that used trained raters, positive correlations between counselor self-efficacy and counseling performance range from small to moderate in size (Beverage, 1989; E. Johnson et al., 1989; L. M. Larson et al., 1992; Munson et al., 1986a; Watson, 1992). Among first-year master’s level students, M. E. Johnson (1985) found considerable variation in the relationship between counselor self-efficacy and performance.

Other studies have examined the relationship between counselor self-efficacy and supervisors’ perceptions of counselor performance. Beverage (1989) reported non-significant positive correlations, whereas L. M. Larson and colleagues (1993) reported large variation among eight beginning level trainees over a 23-week period. In addition to correlational data, some researchers have examined whether counselor self-efficacy is
predictive of counseling performance. L. M. Larson and colleagues (1992), Reese (1993),
and Hanson (2007) all found that counselor self-efficacy is predictive of counseling
performance. For example, L. M. Larson and colleagues found that trait anxiety and self-
efficacy combined accounted for 29% of the variance in performance. This is an
important finding, especially when considering the importance of counselor performance
and client outcome. In contrast to the above findings, E. Johnson and colleagues (1989),
Watson (1992) and Sharpley and Ridgway (1993) did not find self-efficacy to be
predictive of counseling performance. I will now try to explain these discrepancies
below.

Examining the methodology of these above-mentioned studies, some patterns
emerge. First, the studies that report considerable variation were conducted primarily
with prepracticum students enrolled in counseling techniques courses (M. E. Johnson,
1985; L. M. Larson et al., 1993). According to Stoltenberg’s integrated developmental
model of supervision, counselor trainees’ self-efficacy and performance tend to fluctuate
considerably based on recent confirming or disconfirming experiences (Stoltenberg &
McNeill, 2010). Thus, it seems possible that these fluctuations may be affecting the
statistical relationship between counselor self-efficacy and counseling performance. E.
Johnson and colleagues (1989) also suggest two possible interpretations to explain the
small correlations: (a) beginning counselors are poor judges of their counseling abilities
or (b) anxiety associated with evaluation may have interfered with performance. Finally,
E. Johnson and colleagues (1989), Watson (1992) and Sharpley and Ridgway (1993) did
not use published measures of counselor self-efficacy as did the other researchers who
reported that counselor self-efficacy is predictive of counseling performance.
Supervision/work environment. According to L. M. Larson and Daniels (1998), the supervision/work environment includes two distinct parts: the subjective environment (i.e., the perceptions of the counselor, client, or supervisor) and the objective environment (i.e., what actually exists, such as semesters of received supervision). In the subjective supervision environment, there has been mixed findings regarding the relationship between supervisory style (as perceived by the supervisee) and counselor self-efficacy. Specifically, Strauss (1994) found that task orientation (e.g., concern for completing the required job or solving the problem) is significantly and positively related to counselor self-efficacy. Efstation and colleagues (1990) found that both task-oriented and interpersonally sensitive supervision styles are significantly and positively related to counselor self-efficacy. Finally, Hanson (2007) found that attractive and interpersonally sensitive styles are significantly and positively related to counselor self-efficacy, whereas a task-oriented style is not. These inconsistencies may exist because the authors used different measures of counselor self-efficacy, used supervisors with varying degrees of training and experience, and collected data from different sites.

As for the subjective work environment, counselors’ perceptions of collegial and administrative support are modestly related to their self-efficacy (L. M. Larson et al., 1996; Sutton & Fall, 1995). These same studies only found small relationships between counselor self-efficacy and amount of time spent on tasks, weekly client contact hours, client or problem difficulty, and family interference. Of particular concern is the minimal relationship between counselor self-efficacy and client or problem difficulty. Because L. M. Larson and colleagues and Sutton and Fall only examined employed counselors, it may be worth determining whether there is a stronger relationship between counselor
self-efficacy and perceived difficulty of practicum or “internship” placement among those still in training. Since trainees have had fewer opportunities for performance accomplishments, seeing more challenging clients may have a stronger and more negative impact on their self-efficacy than on those who are established as counselors in the field. In fact, prior performance accomplishments can buffer one from experiencing considerable fluctuations in self-efficacy if failure occurs (Bandura, 1977a, 1977b, 1982, 1989b), such as experiencing low rates of client improvement. For counselor trainees, working with populations who experience low rates of improvement (e.g., the severely and persistently mentally ill) could negatively impact their self-efficacy. Thus, I am interested in whether perceived difficulty of practicum or “internship” placement will negatively correlate with counselor self-efficacy. For instance, those who work in community mental health agencies or hospitals probably encounter more pathology and lower client improvement rates than those working in university-based counseling centers or private settings. Therefore, it seems probable that counselor trainees working with more severe populations may have lower self-efficacy given the likelihood they will experience less performance accomplishments as compared to those working with clients who present with normal developmental concerns. For these reasons, the impact of perceived difficulty of one’s first practicum and/or second practicum (sometimes called an “internship”) placement on counselor self-efficacy will be investigated and designated as a predictor variable in this study.

Studying the objective supervision/work environment, L. M. Larson and colleagues (1992) found no significant differences in self-efficacy based on geographical region; however, a main effect for semesters of received supervision was discovered.
Similarly, Harris (2007) also found a positive correlation between amount of clinical supervision and counselor self-efficacy, although this relationship was not significant.

Finally, Cashwell and Dooley (2001) found that counselors receiving supervision reported a significantly higher level of counselor self-efficacy as compared to those not receiving supervision.

Friedlander and colleagues (1986) used an experimental design to investigate if and how role conflict (i.e., receiving feedback that is discrepant with the counselor’s recommendations) with supervisors affects trainees’ self-statements for 52 counselor trainees. From the occupational stress literature, the authors predicted that role conflict would be positively correlated with negative self-statements. Results of this study revealed that trainee-supervisor conflict was not significantly related to trainees’ self-statements. Therefore, it appears as though trainee-supervisor conflict may not have detrimental effects on trainees’ internal reactions or behavior. It is important to note that this study was conducted under contrived circumstances and may have yielded different results if carried out in a natural environment.

To further investigate the objective supervision/work environment component of SCT, Daniels and Larson (2001) explored the impact of bogus feedback (positive vs. negative) on counseling self-efficacy and counselor state anxiety in a pretest-posttest experimental design. According to Bandura (1991, 1977), performance feedback provides information that allows one to make a social comparison. Thus, it is likely that counselor trainees may use performance feedback in supervision to judge how they performed. Daniels and Larson proposed two hypotheses in their study: (a) participants who received positive feedback would report significant increases in counseling self-efficacy from
pretest to posttest as compared to those who received negative feedback and (b) participants who received positive feedback would report significant decreases in state anxiety from pretest to posttest as compared to those who received negative feedback.

In this study, 45 master's level students enrolled in a variety of counseling-related programs (i.e., counseling psychology, counselor education, school counseling, clinical psychology, and marriage and family therapy) volunteered to participate. All of the participants engaged in a 10-minute mock counseling session and were then given either positive or negative feedback by a supervisor. Results revealed that there were significant changes in self-efficacy scores and state anxiety scores depending on the type of feedback received. As predicted, positive feedback significantly decreased state anxiety and significantly increased self-efficacy scores. Negative feedback significantly increased state anxiety and significantly decreased self-efficacy scores. One potential problem with this study is that the feedback was exaggerated in order to create two mutually exclusive conditions. In the actual context of supervision, feedback may not be so extreme.

In an unpublished dissertation, Clark (2005) studied the impact of general versus specific supervisory feedback on the counselor self-efficacy of 54 students enrolled in counseling-related graduate programs. After engaging in a 10-minute mock counseling session, half of the participants received positive general supervisory feedback and the other half received positive specific supervisory feedback. No significant difference in counselor self-efficacy scores was found among participants who received general versus specific feedback.

In a study discussed above, Tang and colleagues (2004) went beyond the supervision environment and examined whether there were any differences in self-
efficacy among counselor trainees enrolled in CACREP programs and those enrolled in non-CACREP programs. Results revealed significant differences between the two groups (i.e., CACREP and non-CACREP) in clock hours of internship and total courses, but no significant difference was found in total counselor self-efficacy between the two groups after adjusting for the covariates.

In addition to the above mentioned studies, four studies suggest that self-efficacy increases following various types of training. Two of the earliest studies regarding counselor self-efficacy and the objective environment were conducted by Munson, Zoerink, and Stadulis (1986b) and Munson and colleagues (1986a). The first study (1986b) compared a micro-skills training group and a mental practice group with a control group to determine which model was more effective for the acquisition of interpersonal skills among therapeutic recreation students. In order to assess effectiveness of both approaches, the researchers measured self-efficacy and competence before and after the training. The micro-skills and mental practice approaches were found to be significantly more effective in increasing self-efficacy and competence as compared to the control group. Furthermore, the micro-skills training approach produced higher levels of competence as compared to the mental practice approach. In their second study, Munson and colleagues (1986a) randomly assigned therapeutic recreation students to three groups: micro-skills training, mental practice, and a control group. Instead of training the students in interpersonal skills, they were trained in decision-making skills. Again, results revealed that competence and self-efficacy were significantly higher for the micro-skills and mental practice groups than the control group at post-test. No differences, however, were found between the two methods of training.
Urbani and colleagues (2002) examined how counseling self-efficacy changes after students are trained in the skilled counselor training model (SCTM). This model is a one-on-one skills training program adapted from the skilled group counseling training model (SGCTM) developed by Smaby, Maddux, Torres-Rivera, and Zimmick (1999). The key elements of the SCTM are mastery, modeling, persuasion, and arousal, which are used to promote the acquisition of skills, self-appraisal of counseling skills, and counseling self-efficacy. Thus, the SCTM teaches counseling skills while promoting accurate assessment of one’s counseling skills and fostering confidence to correctly learn and apply counseling interventions. According to Urbani and colleagues, the SCTM is effective in teaching counseling skills, helping trainees integrate skills with theory, and transferring counseling skills to real-life client situations.

In their study, Urbani and colleagues (2002) recruited 52 first-year master’s students enrolled in a Council for Accreditation of Counseling and Related Education Program (CACREP) to complete the COSE before and after training in the SCTM. Nine participants served as the control group and did not receive the SCTM training. Results revealed that those students who received the SCTM training had significantly higher counseling self-efficacy scores at post-test as compared to those who did not receive the training.

Somewhat similar to Urbani and colleagues (2002), Levitt (2001) investigated the impact of training in active listening on counselor performance and self-efficacy among five female master’s level counselor trainees enrolled in a CACREP program. Results revealed that training in active listening contributed to increases in counselor self-efficacy and performance ratings over a 15-week practicum in individual counseling.
**Synthesis of the Literature**

From this review of the literature, it is clear that many elements of SCT have been studied. However, samples have been diverse in terms of program (e.g., counseling psychology, recreation therapy, counselor education), degree status (BA, MA, or Ph.D.), and progress in program (e.g., prepracticum versus practicum). Thus, it is difficult to make definitive comparisons among these studies. In addition to these differences, the design and methodologies of the above-mentioned studies are varied (e.g., experimental, quasi-experimental, correlational) and may account for some of the variations in results. Another difference pertains to the various instruments used to measure self-efficacy (e.g., COSE, S-EI, CSES), which makes comparisons more difficult. Finally, most of the studies to date have used predominately White samples in the Midwest, thereby limiting external validity.

Despite these problems, broad generalizations can be made regarding findings in the area of counselor self-efficacy according to the SCT framework. In the realm of stable counselor characteristics, mostly small and non-significant relationships with self-efficacy have been found (L. M. Larson & Daniels, 1998). For example, small non-significant relationships have been reported between counselor self-efficacy and personality, aptitude, achievement, gender, and ethnicity (L. M. Larson et al., 1992). However, there are two exceptions: significant positive correlations have been found between amount of counseling experience and counselor self-efficacy (Barbee et al., 2003; Golub, 1997; Harris, 2007; L. M. Larson et al., 1992; Martin et al., 2004; Melchert et al., 1996; Tang et al., 2004) and between level of training and counselor self-efficacy.
In the domain of personal agency variables, outcome expectancies, affective arousal, and self-evaluation have been examined (L. M. Larson & Daniels, 1998). Both Sipps and colleagues (1988) and L. M. Larson and colleagues (1992) found significant positive correlations between counselor self-efficacy and outcome expectancies. As expected, significant negative correlations have been found between counselor self-efficacy and both trait and state anxiety (Alvarez, 1995; Barbee et al., 2003; Daniels, 1997; Friedlander et al., 1986; Kocarek, 2001; L. M. Larson et al., 1992). As for the relationship between counselor self-efficacy and self-evaluation (i.e., a counselor’s judgment of his/her recent performance), several authors report moderate to large positive correlations (Beverage, 1989; Daniels, 1997; L. M. Larson et al., 1996; L. M. Larson et al., 1992).

In general, the findings regarding the relationship between counselor self-efficacy and counseling performance are mixed. Most researchers have found small to moderate positive correlations (Beverage, 1989; E. Johnson et al., 1989; L. M. Larson et al., 1992; Munson et al., 1986a; Watson, 1992). Among first-year master’s level students, M. E. Johnson (1985) found considerable variation in the relationship between counselor self-efficacy and performance. This large variation may partially be explained by developmentally normal fluctuations in self-efficacy, interference of anxiety (E. Johnson et al., 1989), or beginning counselors’ difficulty in accurately assessing their performance (E. Johnson et al., 1989).
Beyond correlational data, some researchers have examined whether counselor self-efficacy can predict performance. L. M. Larson and colleagues (1992), Reese (1993), and Hanson (2007) all found that counselor self-efficacy is predictive of counseling performance. In contrast, E. Johnson and colleagues (1989), Watson (1992), and Sharpely and Ridgway (1993) did not find self-efficacy to be predictive of counseling performance, but it is important to note that they did not use published measures of counselor self-efficacy.

As for the subjective supervision environment, there is mixed research regarding the relationship between supervisory style and counselor self-efficacy (Efstation et al., 1990; Hanson, 2007; Strauss, 1994). In the work environment, counselors’ perceptions of collegial and administrative support are modestly related to their self-efficacy (L. M. Larson et al., 1996; Sutton & Fall, 1995). As mentioned, I plan to investigate the impact of an overlooked variable in the subjective supervision/work environment: perceived difficulty of practicum or “internship” placement.

In the objective supervision/work environment, several researchers have found a positive relationship between amount of clinical supervision and counselor self-efficacy (Cashwell & Dooley, 2001; Harris, 2007; L. M. Larson et al., 1992). More specific than just receiving supervision, Daniels and Larson (2001) found that positive feedback increases counselor self-efficacy and decreases anxiety, whereas negative feedback decreases counselor self-efficacy and increases anxiety. Whether that feedback is general or specific does not seem to affect counselor self-efficacy scores (Clark, 2005).

Other findings in the objective supervision/work environment domain suggest that self-efficacy increases following various types of training. For example, Urbani and
colleagues (2002) found that counselor self-efficacy significantly increases after a specific form of training called the skilled counselor training model. Counselor self-efficacy has also been found to increase after training in active listening (Levitt, 2001), after pre-service training (Barbee et al., 2003), and after role plays (L. M. Larson et al., 1999).

Considering these above-mentioned findings, it is clear that temporary skill training programs have the ability to increase counselor self-efficacy. What remains to be discovered, however, is the impact of more permanent educational programs. Thus, this researcher stands to advance the literature by examining the impact of this environmental component (i.e., educational format) on counselor self-efficacy.

**Predictors of Counselor Self-Efficacy**

Beyond studying the correlates of counselor self-efficacy, some researchers have used regression analyses to determine the significant predictors of counselor self-efficacy. For the most part, the predictors are similar to the largest correlates. Many authors of the studies presented above also conducted regression analyses in order to determine the predictive ability of different variables on counselor self-efficacy. Within this section, I will present findings from those studies as well as additional studies that have used regression analyses to better understand counselor self-efficacy.

Alvarez (1995) and Daniels (1997) found that anxiety and perceptions of fraudulence (i.e., imposter syndrome) contributed the most variance to counselor self-efficacy. Additional significant predictors were positive feedback, perceptions of the environment, and counselor characteristics. Specifically, Daniels found that prior self-efficacy strength, anxiety, and positive feedback predicted 80% of the variance in
counselor self-efficacy, whereas Alvarez found that perceptions of fraudulence and experimental sources predicted 43% of the variance in counselor self-efficacy.

Melchert and colleagues (1996) found that experience level and level of training together accounted for 43% of the variance in counselor self-efficacy. Similarly, Watson (1992) found that counseling-related coursework and counseling-related experience accounted for 35% of the variance in counselor self-efficacy. These findings further support the large body of literature that connects training and experience to counselor self-efficacy.

Bentley (2007) found that mindfulness, attention, and empathy accounted for 34% of the variance in counselor self-efficacy. Similarly, Hall (2009) found that certain facets of mindfulness accounted for 20% of the variance in counselor self-efficacy. Thus, it appears as though some internal characteristics can impact self-efficacy. It may also be possible that some of these variables, especially mindfulness, may be working to lower anxiety, thereby increasing self-efficacy.

In the supervision/work environment domain, Hanson (2007) reported that counselors’ perceptions of the supervisory working alliance accounted for 31% of the variance in counselor self-efficacy. Efstation and colleagues (1990) found that perceptions of supervisory style by both the supervisor and the supervisee accounted for 14% of the variance in counselor self-efficacy. Similar to Efstation and colleagues, Fernando and Hulse-Killacky (2005) studied the impact of perceived supervisory style on counselor self-efficacy among counseling students. Specifically, 13% of the variance in self-efficacy was explained by the linear combination of three supervisory styles: attractive, interpersonally-sensitive, and task-oriented. However, only the task-oriented
style had a statistically significant contribution to counselor self-efficacy. Ossana (1990) found that supervisors’ and supervisees’ perceptions of the match between the supervisee’s skill level and the supervision environment predicted 12% of the variance in counselor self-efficacy over time. Finally, Sutton and Fall (1995) found that staff and administrator support of school counselors predicted 10% of the variance in counselor self-efficacy and Golub (1997) found that facilitative supervisory conditions (e.g., empathy, support) predicted 7% of the variance in self-efficacy among doctoral level trainees.

Taking these findings together, it is clear that level of experience, level of training, anxiety, and the supervision/work environment contribute significant variance to counselor self-efficacy. As mentioned before, there is a lack of research that examines how a more enduring aspect of the environment impacts counselor self-efficacy: the educational format. One way to differentiate between educational formats is by cohort versus non-cohort. If it is discovered that type of educational format can predict a significant amount of variance in counselor self-efficacy above and beyond level of experience, level of training, anxiety, and perceptions of the supervision/work environment, there may be implications for training as well as the structuring of programs. At this point, I will present research regarding cohort educational programs.

**Cohort Educational Programs**

In this section, I will provide definitions for cohort and non-cohort educational formats followed by a brief overview of historical forces leading to the development of cohort formats. Next, I will provide an illustration of how the group dynamics literature has been used to conceptualize and study cohorts. I will then discuss the benefits and
challenges associated with cohorts. Finally, based on the literature presented, I will provide a rationale for why cohort formats may increase counselor self-efficacy at the end of this section.

**Definitions.** A cohort can be defined as “a group of individuals [who] enter a program at the same time, proceed through all classes and academic requirements together, completing together, thus creating an atmosphere for learning in which a synergy is present and the learners’ effectiveness is increased” (Saltiel & Reynolds, 2001, p. 6). Lawrence (2002) defined a cohort as “a small group of learners who complete an entire program of study as a single unit” (p. 83). Similarly, Twale and Kochan (2000) stated that “a typical cohort may be an entering class of full time graduate students taking core courses together, or a group that passes through all course work together” (p. 190). According to Yerkes, Basom, Norris, and Barnett (1995b), implicit in emerging definitions of cohorts include such characteristics as a supportive learning environment, independent and interdependent learning opportunities, cohesiveness, networking, and a sense of group purpose. Cohorts are currently being used in various graduate programs, but the majority of research concerning cohorts has been conducted in the context of medical schools, law schools, business education programs, and educational administration programs (Huey, 1996).

In contrast to a cohort educational program, a non-cohort educational program (sometimes called “stranger groups” [Reynolds & Hebert, 1998]) typically allows students to select from a variety of classes each semester on an individual basis (Little, 2009). Thus, there is not an attempt to keep certain groups of students together as they progress through the program. In other words, those in a non-cohort program progress at
varied rates and do not take all their classes together. Furthermore, non-cohort programs typically admit applicants several times per year as compared to cohort programs that typically admit a smaller number of students once per year.

**Development of the cohort format.** Cohorts in graduate and professional programs have been developed for a variety of reasons. For some programs, political, economic, and social influences prompted the implementation of cohorts. For other programs, cohorts were implemented because they fit with emerging visions of education. Still, other programs have incorporated cohorts for logistical and practical reasons (e.g., ease of scheduling). I will provide some examples below.

Reform movements (e.g., the Kellogg Foundation, the Cooperative Program in Educational Administration, the Leadership in Education in Appalachian Project) introduced cohort educational formats to educational administration programs in the 1940s (Achilles, 1994); however, early use was limited due to authoritarian views of management in which school administrators were seen as autocratic leaders of schools. Thus, the collaborative nature of cohorts was incongruent with the rational and orderly zeitgeist of the time (Basom et al., 1996; Basom, Yerkes, Norris, & Barnett, 1996/1997). Furthermore, because the implementation of cohort programs was externally funded, many programs were discontinued once the funding dissipated (Basom et al., 1996/1997). By the 1980s, the cohort concept reemerged due to demands for educational reform and the Danforth Program (1987), which provided national funding for the implementation of cohorts in educational administration programs (Barnett & Caffarella, 1992; Basom et al., 1996).
In the field of education, the concept of ‘learning communities’ is now very popular. ‘Learning communities’ encourage collaboration and shared knowledge among members (Maher, 2005). According to Saltiel and Russo (2001), the student cohort represents one of the many ways that ‘learning communities’ can be realized. Therefore, educational preparation programs have increasingly incorporated the use of cohorts. In support of this change, faculty, administrators, and students have acknowledged the structural and programmatic benefits of cohorts. For example, Maher (2005) indicated that faculty members favor the use of cohorts due to the consistent pattern of course offerings, which facilitates course preparation and coordination well in advance. Administrators favor the use of cohorts because the predictability of enrollment stabilizes funding (Maher, 2005). Finally, students like cohorts because their class sequence and timeline is firmly established at matriculation into the program (Maher, 2005).

**Cohorts as groups.** Because cohorts are groups, factors that characterize well-functioning groups are useful in the study of cohorts (Yerkes et al., 1995b). In fact, several researchers have used the group dynamics literature as a framework from which to examine and make recommendations regarding the cohort experience (e.g., Basom et al., 1996; Yerkes, Basom, Barnett, & Norris, 1995a; Yerkes et al., 1995b). According to Norris and Barnett (1994), community is created by the dynamic interplay between individuals and groups. In particular, individuals derive support and affirmation through groups, leading to personal transformation. Reciprocally, individuals transform groups through their collective efforts and commitment to a common purpose. For these transformations to occur, Norris and Barnett suggested that three group dynamics are necessary: (a) common purpose, (b) social interaction, and (c) interdependence (D. W.
Johnson & F. P. Johnson, 1987). These three components combine to foster both individual and group growth. Below, I will discuss how the development of these group dynamics can be promoted in the context of cohort formats.

There are many ways in which a sense of common purpose among students can be encouraged and fostered. For example, faculty can admit students who share similar commitments, assume a facilitative versus directive role, and allow cohort members to set group goals throughout the course of their program (Basom et al., 1996). In a qualitative study, Yerkes and colleagues (1995b) found that faculty at 23 different institutions initiated activities such as team-building exercises, journals, problem-based learning, and small group activities in order to support the development of common purpose among cohort members.

Because affiliation with others is important to adult learners (Barnett & Muse, 1993), faculty members should work to create learning environments where social interaction, the second group dynamic, is encouraged. One way to do this is to limit the size of the cohort. In fact, Basom and colleagues (1996) recommended that cohorts do not exceed 25 members so that students can develop closer relationships with one another as well as with faculty. Faculty can also encourage social interaction through initial development activities, allowing student input, and encouraging sustained contact after graduation (Barnett & Caffarella, 1992). In a study looking at various cohort-based educational administration programs, Yerkes and colleagues (1995b) found that faculty members encouraged social interaction by organizing retreats, meals, group activities, site visits, and cultural excursions.
Interdependence, the third group dynamic, is achieved through common purpose, collaboration, and sustained interaction (Norris & Barnett, 1994). In order for cohort members to become interdependent, there needs to be opportunities for both individual and group development (Forsyth, 1990). Individual development can be facilitated by activities that require self-reflection and self-initiation (e.g., writing in journals) and risk-taking and experimentation (e.g., developing learning plans). Group development can be facilitated by utilizing team building activities and allowing cohort members to share their internship experiences (Basom et al., 1996). In Yerkes and colleagues’ (1995b) study, individual and group development of cohort members was facilitated through collaborative projects, self-assessment inventories, the keeping of journals, reflective sessions, and individual learning plans. When these (and similar) group dynamics are developed and maintained in the context of cohort formats, many benefits can be derived.

**Benefits of cohorts.** Compared to empirical data, there is more self-report and anecdotal data regarding the benefits of cohorts (Muth & Barnett, 2001), yet the studies tend to yield very similar results. For ease of discussion, I will group the benefits into three major areas pertaining to: (a) support, collaboration, and cohesiveness; (b) bonding and the development of closer interpersonal relationships, and (c) academic, professional, and personal gains. This scheme is not a perfect division, however, as there is substantial overlap across these areas and their corresponding studies. I will review these three areas below.

**Support, collaboration, and cohesiveness.** Several authors have discussed how cohort membership provides support, allows for collaboration, and promotes cohesiveness (e.g., Barnett & Muse, 1993; M. S. Hill, 1995; Norris & Barnett, 1994;
Sprague & Norton, 1999; Twale & Kochan, 2000; Witte & James, 1998). In one study, Potthoff and colleagues (2001) used both qualitative and quantitative methodologies to study the impact of a cohort-based master’s level degree program for 28 practicing teachers. As part of their degree requirements, participants completed electronic portfolios in which they discussed their growth as well as their most powerful experiences. Qualitative analysis of these portfolios revealed that the participants supported each other and each others’ learning. One participant felt as though he could “always turn to the cohort for support when the work load or stress got too high” (p. 39). The respondents also completed a 94-item survey based on Huey’s (1996) descriptions of cohort dimensions. Overall, participants felt very positive about their cohort experience. In particular, they strongly agreed that the cohort became a collaborative community of learners and that the cohort members provided encouragement to one another.

Reynolds and Hebert (1995) hypothesized that cohort program formats and intensive schedules (i.e., classes offered in four or more hour blocks) would increase group interaction and group cohesiveness for adult learners in a way similar to how younger, full-time students experience the interaction and cohesiveness inherent in many extracurricular activities. Quantitative data were gathered from participants enrolled in four different master’s level public administration programs. Results revealed that group interaction and group cohesiveness were significantly greater in the two cohort groups as compared to the non-cohort groups, while the type of scheduling did not demonstrate a significant relationship to either of the dependent variables. Given the findings, the authors suggested that cohorts can be used to increase student involvement, integration
into the university community, group interaction, and group cohesiveness for non-traditional adult learners.

Finally, Teitel (1997) conducted a qualitative study to identify perceived benefits and drawbacks of graduate level cohort programs in school leadership. Faculty and students were asked to complete anonymous surveys regarding the impact of cohorts among students, within the faculty, and between students and faculty. Both students and faculty reported gains in support and connection among students. For example, one participant said, “The program has an intense time requirement which cuts people off from regular sources of support. The cohort helps fill the void” (p. 69).

**Bonding and closer interpersonal relationships.** Several authors have discussed how cohort membership contributes to bonding and a sense of belonging among members (Barnett et al., 2000; Basom et al., 1996; Little, 2009; Twale & Kochan, 2000; Witte & James, 1994; Yerkes et al., 1995a). Even more, Potthoff and colleagues (2001) discovered that some cohort members consider their cohort to be a “family.” Similar results were obtained by Maher in 2005. In particular, Maher examined the experiences of 13 students enrolled in a cohort-based master’s level program in education over a period of 10 months. Interviews and observational data were qualitatively examined in order to determine how students’ cohort membership evolved over time and shaped their educational experiences and peer and faculty relationships. In general, the meaning and influence of cohort membership were fluid and became progressively more significant over time. More specifically, participants reported that being together over time was helpful because they were able to share similar experiences and cultivate deeper interpersonal relationships with one another. Approximately half of the students
described their peers in “family-like” terms, whereas the other half reported a “team” orientation. Those who perceived the cohort to be like a “family” expressed a sense of responsibility to care for and support one another. Those who were more “team” oriented indicated that they preferred to focus on the completion of task assignments. Overall, participants reported a sense of comfort and acceptance within the cohort.

Closer interpersonal relationships are efficacious for a variety of reasons. First, strong interpersonal relationships serve to increase networking and decrease professional isolation (Barnett et al., 2000; M. S. Hill, 1995; Nonis, Barnett, Basom, & Yerkes, 1996). Second, the personal connections forged between cohort members can foster deeper discussions of sensitive topics (e.g., race) as compared to what is typically experienced in traditional graduate programs (Teitel, 1997). Finally, interpersonal relationships forged as being a member of a cohort can make a critical difference to students’ emotional and psychological well-being, academic learning, and ability to broaden one’s perspectives (Drago-Severson et al., 2001).

**Academic, professional, and personal gains.** There has been some research linking cohort membership to academic gains (Barnett et al., 2000; Barnett & Muse, 1993; Browne-Ferrigno & Muth, 1993; Drago-Severson et al., 2001; M. S. Hill, 1995; Tinto & Russo, 1994). In one study, Reynolds and Sitharaman (2000) examined the differences in cognitive learning, affective learning, and learning transfer between students enrolled in cohort-based and non-cohort-based Masters of Business Administration, Masters of Public Administration, and Educational Administration programs. For the purpose of this study, cognitive development was defined as intellectual processes, such as knowledge acquisition, reasoning, and critical thought.
Affective development was defined as “personal maturation and includes attitudes, values, beliefs, self-esteem, and interpersonal competencies” (p. 32-34). Learning transfer was defined as the application of cognitive learning to real-life work settings to solve problems, plan, or apply skills. Cohort students demonstrated significantly higher learning gains in the affective domain as compared to non-cohort students, especially among males, younger adult students (ages 24-29), and full-time students. There were no significant differences between the two groups in the cognitive or learning transfer domains. The authors suggested that perhaps the bonds formed among cohort students may have some learning benefits, particularly in the affective realm.

Other academic benefits associated with cohort membership include increased involvement in social and academic activities (Tinto & Russo, 1994); shared responsibility for learning and a growing awareness of one’s learning style (Sprague & Norton, 1999); academic persistence (Barnett et al., 2000; M. S. Hill, 1995; Little, 2009; Tinto & Russo, 1994); and degree completion (Hearn, 2008; Koss, 2003). M. S. Hill (1992) found that the collaborative nature of cohorts not only improves academic performance, but increases motivation for scholarship and personal expectations. Finally, MacKay, Hill, and Wang (1994) found that 63% of students enrolled in cohorts chose to pursue advanced graduate studies following graduation as compared to 25% of those who were not enrolled in cohorts.

Regarding professional skills, cohort membership has been associated with leadership skills (Barnett et al., 2000; Basom et al., 1996), problem-solving skills (Basom et al., 1996), and continued networking among cohort members after degree attainment.
(Barnett et al., 2000; M. S. Hill, 1995; Twale & Kochan, 2000). These benefits may be related to the cohesion, collaboration, and shared purpose characteristic of cohorts.

Cohort membership has been associated with several forms of personal development. For example, Basom and colleagues (1996) discussed the association between cohort membership and awareness of one's strengths and weaknesses; tolerance and respect for individual differences; risk-taking; examination of values; and faith in one's abilities, values, and convictions. The safe and supportive “holding environment” (Drago-Severson et al., 2001) of a cohort allows for exposure to a wide variety of perspectives (Barnett & Muse, 1993; Drago-Severson et al., 2001; Witte & James, 1994). Thus, it makes sense that cohort membership fosters self-reflection (Barnett & Muse, 1993; Basom et al., 1996) and empathy for others (Drago-Severson et al., 2001). Of upmost import to this dissertation study, several authors have found an association between cohort membership and increased self-esteem and professional confidence (Drago-Severson et al., 2001; Norris & Barnett, 1994; Potthoff et al., 2001; Sprague & Norton, 1999; Yerkes et al., 1995a), two constructs related to self-efficacy (e.g., Dunnewold, 1982).

**Challenges associated with cohorts.** Despite the many benefits associated with cohorts, faculty members have reported some challenges. First, developing and maintaining cohort programs takes a concerted amount of time and effort (M. S. Hill, 1995; Norton, 1995). Thus, some faculty members feel as though they do not have adequate time for other requirements, such as scholarship and service (Basom et al., 1996; M. S. Hill, 1995; Yerkes et al., 1995b). Second, due to the close relationships that develop between students and faculty, faculty members may feel uncomfortable when
given access to sensitive information (e.g., emotional difficulties, family problems) about their students (Basom et al., 1996). Third, faculty members have voiced concerns regarding the power of cohort members to bond together and challenge curriculum delivery and instructor decisions (Barnett et al., 2000; Barnett & Muse, 1993; Basom et al., 1996). A comment made by one student captures the magnitude of this collective power well: “Because we are the whole group, we can demand changes and input into them. We cannot be ignored because of our power in numbers and unity” (Teitel, 1997, p. 76).

Similar to faculty concerns, student concerns also tend to center around interpersonal relationships and structural elements. For example, some students enrolled in cohort programs fear being “trapped” in unpleasant relationships or being excluded from “cliques” based on academic ability and effort (Teitel, 1997). Other negative aspects that have been reported include: dominant, overpowering personalities of some cohort members (Barnett et al., 2000; Norris & Barnett, 1994; Norton, 1995; Sprague & Norton, 1999; Witte & James, 1998), unequal group participation (Norris & Barnett, 1994; Sprague & Norton, 1999), competition among students (M. S. Hill, 1995), and difficulty working as part of a team (Norris & Barnett, 1994). Non-cohort students may feel left out or inferior to cohort members, especially when cohort members are given preferential registration and instructor assignments (Basom et al., 1996; M. S. Hill, 1995). Unfortunately, some of these problems can serve to diminish learning outcomes (Browne-Ferrigno & Muth, 2003).

Structural elements associated with cohort formats have also been labeled disadvantageous by students. In particular, the “rigid structure” of coursework (Sprague...
& Norton, 1999) causes problems for those who wish to complete the program on a different timetable (Merino, Muse, & Wright, 1994) or who need to take a leave of absence (Barnett et al., 2000). Despite all of the above-mentioned challenges, difficulties, and negative aspects associated with cohort formats, widespread faculty and student support can be found throughout the literature (Barnett & Muse, 1993; M. S. Hill, 1995).

**Cohort membership and counselor self-efficacy.** Based on the literature, there are several reasons why cohort membership may contribute to counselor self-efficacy. First, several studies have demonstrated a direct link between cohort membership, self-esteem, and professional confidence (e.g., Drago-Severson et al., 2001; Norris & Barnett, 1994; Potthoff et al., 2001), two constructs related to self-efficacy (e.g., Dunnewold, 1982). Second, the safe and supportive cohort environment may encourage students to take risks, try out new behaviors, and trust the feedback of their peers. Practicing counselor skills in front of one’s peers can be anxiety-provoking, but if done in a supportive and encouraging environment, individuals may acquire more practice, thereby increasing their self-efficacy through performance accomplishments. Third, cohort membership has been associated with gains in affective learning, and self-esteem is included in this domain (Reynolds & Sitharaman, 2000). Finally, cohort members provide a great deal of support and encouragement (i.e., verbal persuasion) to one another (Potthoff et al., 2001), and verbal persuasion is a source of self-efficacy.

**Council for Accreditation of Counseling and Related Educational Programs (CACREP)**

Only participants from CACREP programs were studied in order to decrease some of the noise and extraneous variables related to the training environment. CACREP
was established in 1981 by the American Association for Counseling and Development (now the American Counseling Association) and is considered the primary accrediting body for the counseling profession. The accreditation movement has its roots in much debate, discussions, and decisions that began in 1967 with George Hill’s Manual for Self-Study by a Counselor Education Staff. Hill’s manual was then followed by relevant publications produced by the Association for Counselor Education and Supervision (ACES), an accreditation initiative in California, several political and professional actions during the 1970s, and eventually the creation of CACREP (J. J. Schmidt, 1999).

Currently there are 513 CACREP-accredited master’s level programs and 58 doctoral programs located in the United States (Council for Accreditation of Counseling and Related Educational Programs, 2010a).

The vision of CACREP is to provide leadership and promote excellence through accreditation of counselor education programs, and the mission of CACREP is to promote the professional competence of practitioners through the “development of preparation standards, encouragement of excellence in program development, and the accreditation of professional preparation programs” (Council for Accreditation of Counseling and Related Educational Programs, 2010b). Core values of CACREP include the following: advancing the counseling profession; ensuring a fair and ethical decision-making process; protecting the public; promoting growth, change, and collaboration; and implementing standards that reflect the needs of society, acknowledge diversity, and encourage program improvement and best practices (Council for Accreditation of Counseling and Related Educational Programs, 2010b). The CACREP standards include eight core curriculum standards regarding the areas in which students are expected to

Since the inception of CACREP, there have been several studies examining the perceptions of counselor educators, students, and graduates regarding the relevance of CACREP standards. According to J. J. Schmidt (1999), over the past 20 years, reviews and discussions of CACREP have mostly been presented in a favorable light. Specifically, none of the articles have questioned the rationale for establishing CACREP and few have challenged the standards. Of those that have challenged the standards, most of the criticisms are related to the number of contact hours required, number of faculty needed to meet the standards, and administrative support from the graduate institutions that house CACREP programs. Perceptions regarding the appropriateness of the standards tend to come from surveys completed by faculty and students.

Cecil and Comas (1986) surveyed faculty members and found that they were satisfied with the standards overall. In particular, the majority of items received over 80% approval ratings. Vacc (1992) found that the majority of counselor educators believed the standards were important to accreditation. For example, the majority of respondents rated each area to be crucial or important (91-100%). McGlothin and Davis (2004) surveyed 641 random members from the American Mental Health Counselors Association, American School Counselor Association, and the Association for Counselor Education and Supervision to determine the perceived benefits of the core curriculum standards. Overall, the standards were perceived to be beneficial.
Wilcoxon, Cecil, and Comas (1987) found that students from CACREP programs showed significantly more positive attitudes toward accreditation than did students from non-CACREP programs. Another difference was that students from CACREP programs ranked internship as the third most important aspect of their training, whereas students from the non-CACREP programs ranked internship as the sixth most important aspect of their training. In summary, most of the research has addressed student and faculty perceptions of the core standards and not whether there are any differences in proficiency among those who graduate from CACREP and non-CACREP programs. Thus, in order to control for any potential noise and extraneous variables related to the training environment, only students enrolled in CACREP programs were eligible to participate in this study.

Summary

In summary, much research has been conducted regarding counselor self-efficacy. Given that self-efficacy is a central component of Bandura’s social cognitive theory, some researchers have suggested that counselor self-efficacy be studied within the larger context of social cognitive theory (L. M. Larson & Daniels, 1998). In other words, counselor self-efficacy should be studied within the following domains of Bandura’s social cognitive theory: personal characteristics and personal agency, performance, and the environment.

Researchers have discovered that the largest correlates and predictors of counselor self-efficacy are level of experience, level of training, anxiety, and perceptions of the supervision or work environment. All of these can be situated in at least one domain of Bandura’s social cognitive theory. Specifically, anxiety can be classified as a personal
agency variable; level of training and level of experience are both counselor characteristic variables; and perceptions of the environment clearly fit within the environmental domain. Counselor performance is beyond the scope of this study.

After reviewing the literature, I discovered that the impact of the educational format (defined as cohort versus non-cohort for the purpose of this study) on counselor self-efficacy has not yet been examined. Thus, I am interested in discovering how much additional variance in counselor self-efficacy can be predicted above and beyond level of experience, level of training, anxiety, and perceptions of the supervision/work environment. Taking into consideration Bandura's theoretical predictions and empirical findings as well as the literature concerning the benefits of cohorts, it seems probable that cohort membership would be positively related to counselor self-efficacy. Therefore, the purpose of this research study is to discover whether and to what extent cohort educational programs impact counselor self-efficacy.
CHAPTER III
METHODS

Introduction

Within this chapter, I will describe the final sample, including sample size, inclusionary and exclusionary criteria, and demographic information. Next, I will describe the psychometrics, reliability, and validity estimates for all the instruments that were used in this study. I will then outline the research procedures and the data collection process, which will be followed by a discussion of the design and the proposed analyses.

Participants

A power analysis was conducted in order to determine the minimum number of participants needed to detect an effect. According to Cohen (1992), at least 97 participants are needed to detect a medium effect size (.50) when power is set at .80, alpha at .05, and when there are six predictor variables in a multiple regression analysis. According to the Survey Monkey response collector, 150 total surveys were attempted, but only 115 surveys contained complete data. Eleven of the 115 surveys were eliminated because the participants either did not indicate their program of study, had too many missing data points (i.e., more than five), or were enrolled in programs beyond the focus of this study (e.g., school counseling, counseling psychology, rehabilitation counseling). Thus, there were 104 total participants in this study.

Among the data included in the final analysis, there were 28 cases missing less than five data points each. Overall, there were a total of 41 missing data points. Since the data points appeared to be missing completely at random, the Expectation-Maximization
(EM) algorithm was used to predict the missing data points. EM estimates the data parameters based on the information that is available and then fills in the missing data based on these parameters. Next, the parameters are re-estimated based on the filled-in data. In order to prevent underestimation of error, EM adds a small amount of error to the variances it estimates and then uses those estimates to impute the data until the solution stabilizes. When the solution stabilizes, maximum likelihood estimates of the parameters and regression coefficients are given (Howell, 2009). EM was achieved by using the Missing Value Analysis function in SPSS.

Of the 104 total participants, 70 (67.3%) indicated that they were enrolled in a non-cohort educational program, whereas 34 (32.7%) indicated that they were enrolled in a cohort educational program. Forty-three (41%) participants were enrolled in clinical mental health counseling programs, 24 (23%) in community counseling programs, 17 (16%) in mental health counseling programs, 13 (13%) in marital, couple, and family counseling programs, and seven (7%) in college counseling programs.

The majority of participants in this study identified as female, Caucasian/White/Non-Hispanic, heterosexual, and middle class. The mean age of participants was 31.66 (SD = 10.70). In addition, the majority of participants had no experience in the human services field prior to initial enrollment and were not yet enrolled in their first practicum. There was a relatively equal spread among the participants in terms of credit hours completed, with the exception of the last category (i.e., 61+ credits) which contained much fewer participants. A more detailed description of demographic and status variables can be found in Chapter IV.
Measures

A background questionnaire was used in order to understand the descriptive characteristics of the participants as well as their training level, experience level, perceived difficulty of practicum or “internship” placement, and type of educational format. Counselor self-efficacy was measured using the Counseling Self-Estimate Inventory (COSE, L. M. Larson et al., 1992) and the Counselor Activity Self-Efficacy Scales (CASES; Lent et al., 2003). Two measures of counselor self-efficacy were used to reduce mono-operation bias for this important construct. Counselor anxiety was measured by the State-Trait Anxiety Inventory (STAI, Spielberger et al., 1983), which has been used in prior studies attempting to understand how anxiety is related to counselor self-efficacy.

Background questionnaire. A background questionnaire designed by this researcher was used to collect the following demographic information: age, gender, race/ethnicity, sexual orientation, family of origin socioeconomic status, name of current program (e.g., community counseling), level of prior experience in the human services field, level of training, practicum or “internship” status, perceived difficulty of practicum or “internship” placement, and type of educational format (i.e., cohort versus non-cohort). Information pertaining to age, gender, race/ethnicity, sexual orientation, and family of origin socioeconomic status was collected for descriptive purposes. The background questionnaire can be found in Appendix J.

As for level of experience, participants were asked to indicate how many years of paid and/or non-paid experience they have had in the human services field prior to initial enrollment in their current program. Some examples of human services field work
include volunteering at a homeless shelter, working as a case manager, and answering phones for a crisis or suicide hotline. Response choices were limited to the following: (a) none, (b) 1-5 years, (c) 6-10 years, and (d) 11+ years. Conceptualizing level of experience as counseling-related work that is obtained before initial enrollment is just one of several approaches discussed in the literature. In this study, the categories chosen to quantify this variable are consistent with the ones used by Tang and colleagues (2004). I chose to conceptualize experience this way in order to keep experience and training as separate as possible.

Level of training (i.e., number of course credits completed) was assessed by the following forced choice categories: (a) 0-12 credits, (b) 13-24 credits, (c) 25-36 credits, (d) 37-48 credits, (e) 49-60 credits, and (f) 61+ credits. Participants were asked to indicate their practicum or “internship” status by choosing among the following response options: (a) not yet enrolled in first practicum, (b) enrolled in first practicum, (c) finished with first practicum, but not yet enrolled in second practicum or “internship,” (d) enrolled in second practicum or “internship,” and (f) finished with second practicum or “internship.” Perceived difficulty of current or most recent practicum or “internship” placement was assessed on a five-point Likert-type scale ranging from 1 (not difficult) to 5 (very difficult).

Finally, each participant was asked whether he/she is a member of an official cohort program in order to determine the student’s educational format. A definition of what a cohort program is was provided for the students to read before providing their response to this item. This definition was based on the definitions provided in Chapter II
as well as the language Little (2009) used in her dissertation to help students differentiate between cohort and non-cohort formats.

**Counselor self-efficacy: COSE.** Developed by L. M. Larson and colleagues (1992), the COSE measures “a counselor’s beliefs or judgments about his or her capabilities to effectively counsel a client in the near future” (p. 180). The COSE is composed of 37 six-point Likert-type items that yield a total self-efficacy score as well as five subscale scores (i.e., Microskills, Process, Difficult Client Behaviors, Cultural Competence, and Awareness of Values). Responses are arranged on a Likert-type scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*) with higher scores indicating higher counselor self-efficacy. Thus, possible scores range from 37 to 222. In a comprehensive review of the counseling self-efficacy literature, L. M. Larson and Daniels (1998) stated that the COSE has been used more frequently than any other measure of counselor self-efficacy. Sample items from the COSE can be found in Appendix K and permission to use the COSE can be found in Appendix B.

The Microskills subscale contains 12 items that measure one’s self-efficacy concerning his or her ability to use microcounseling skills in isolation. The Process subscale contains 10 items that reflect a counselor’s actions that occur over a series of responses (e.g., clarification and definition of the problem, development and selection of concrete client goals). The Difficult Client Behaviors subscale is composed of seven items, four of which focus on clients who are suicidal, unmotivated, silent, abused, indecisive, or alcoholic. Two of the items concern the possession of adequate knowledge and techniques for dealing with these problems and one item pertains to the use of one specific microcounseling skill. The Cultural Competence subscale is composed of four
items that concern behaving competently when working with ethnically and socially
diverse clients. Finally, the Awareness of Values subscale is composed of four items that
concern the counselor’s biases or values.

Internal consistency and test-retest reliability estimates for the COSE have been
calculated by various authors. L. M. Larson and colleagues (1992) reported the following
internal consistencies for each scale when administered to master’s level counselor
trainees: .93 for the total score, .88 for Microskills, .87 for Process, .80 for Difficult
Client Behaviors, .78 for Cultural Competence, and .62 for Awareness of Values. In
another study, Martin and colleagues (2004) reported the following internal consistencies
for each subscale: .81 for Microskills; .84 for Process; .72 for Difficult Client Behaviors;
.61 for Cultural Competence; and .51 for Awareness of Values. Due to some of the lower
internal consistency estimates, L.M. Larson and colleagues recommend using the total
score. In this study, the Cronbach alpha coefficient was .94 for the total COSE score.
Larson and colleagues found that three week test-retest reliabilities were: .87 for the total
score, .68 for Microskills, .74 for Process, .80 for Difficult Client Behaviors, .71 for
Cultural Competence, and .83 for Awareness of Values.

Several authors have also demonstrated convergent and discriminate validity for
the COSE. Convergent validity was demonstrated by Larson and colleagues (1992) when
they found significant positive relationships between the total COSE score and a self-
concept measure (Tennessee Self Concept Scale; Fitts, 1988) and between the total
COSE score and a problem-solving measure (The Problem Solving Inventory; Heppner,
1988). As for discriminate validity, self-efficacy scores were not related to social
desirability (Social Desirability Scale; Crowne & Marlow, 1960), aptitude (i.e., Graduate
Record Examination scores; Educational Testing Service, 1988) academic performance (i.e., grade point average), or personality type (Myers-Briggs Type Indicator; Myers & McCaulley, 1985).

**Counselor self-efficacy: CASES.** The CASES (Lent et al., 2003) was developed to assess one’s self-efficacy for performing helping skills, managing the counseling process, and handling challenging counseling situations. The CASES is composed of 41 items, divided into six subscales (i.e., Exploration Skills, Insight Skills, Action Skills, Session Management, Client Distress, and Relationship Conflict). All items are arranged on a 10-point Likert-type scale ranging from no confidence (0) to complete confidence (9). Higher subscale and total scores indicate higher self-efficacy. Thus, possible scores range from 0 to 369. Sample items from the CASES can be found in Appendix L and permission to use the CASES can be found in Appendix C.

The Exploration Skills subscale is composed of five items that measure one’s perceived ability to develop a facilitative counseling relationship and elicit necessary information from the client (e.g., using reflection and open-ended questions). The Insight Skills subscale contains six items that measure one’s perceived ability to help the client develop an understanding of his/her problems (e.g., using immediacy statements and challenging client contradictions). The Action Skills subscale is composed of four items that measure one’s perceived ability to promote change in client thought, behavior, or affect (e.g., providing direct guidance and role-playing). The Session Management subscale is composed of 10 items designed to capture one’s perceived ability to manage a variety of common counseling tasks (e.g., using the correct counseling skills based on the client’s needs at a given moment and helping one’s client discuss concerns at a ‘deep’
The Client Distress subscale is composed of six items and measures one's perceived ability to work effectively in highly challenging situations (e.g., seeing a client who has experienced a traumatic life event). Finally, the Relationship Conflict subscale is composed of 10 items and measures one's perceived ability to handle relationship conflict (e.g., sexual attraction, manipulation). The first four subscales correspond to basic skills, whereas the last two subscales correspond to more advanced skills.

Lent and colleagues (2003) calculated internal consistency, test-retest reliability, convergent validity, and discriminate validity estimates. They administered the CASES to undergraduate students enrolled in a helping skills training course, master’s level students enrolled in a practicum, and doctoral level students enrolled primarily in counseling psychology programs. Lent and colleagues found the following internal consistencies: .97 for the total score, .79 for Exploration Skills, .85 for Insight Skills, .83 for Action Skills, .94 for Session Management, .94 for Client Distress, and .92 for Relationship Conflict. In this study, only the total CASES score was used in order to allow for comparison with the COSE. The Cronbach alpha coefficient for the total CASES score was .98 in this study. In Lent and colleagues’ study, the two-week test-retest reliability estimates ranged from .59 to .76. In the same study, the CASES’ total score correlated highly with the COSE’s total score (r = .76), suggesting good convergent validity. Furthermore, an insignificant correlation between the CASES’ total score and a measure of social desirability was found, suggesting good discriminate validity.

In their seminal article, Lent and colleagues (2003) argued that previous measures of counseling self-efficacy were flawed for the following reasons: (a) they assumed a level of knowledge of counseling tasks above and beyond that of beginning trainees; (b)
they contained content and formats that tap constructs (e.g., values) other than self-efficacy; and (c) they may not have adequately measured self-efficacy relative to more advanced skills (e.g., counseling a seriously depressed client). Because no other measures were explicitly grounded in theory, Lent and colleagues grounded the CASES in C. E. Hill and O'Brien's helping skills model (C. E. Hill & O'Brien, 1999).

**Counselor anxiety: STAI.** Anxiety was measured with the State-Trait Anxiety Inventory (STAI; Spielberger et al., 1983). State anxiety is defined as a temporary emotional reaction involving tension, nervousness, worry, and activation of the autonomic nervous system (Spielberger et al., 1983). The State Anxiety form (Form Y-1) of the STAI is composed of 20 Likert-type items that measure one's subjective anxiety level experienced at the time of responding to the questionnaire. Responses are anchored on a scale ranging from *not at all* (1) to *very much so* (4), with higher scores indicating more anxiety. In contrast to state anxiety, trait anxiety refers to "relatively stable individual differences in anxiety proneness" (Spielberger et al., 1983, p. 5). The Trait Anxiety form of the STAI (Form Y-2) is composed of 20 Likert-type items anchored on a scale ranging from *not at all* (1) to *very much so* (4). Total scores on each individual measure range from 20 to 80. Sample items from the STAI can be found in Appendix M and permission to use the STAI can be found in Appendix D.

Test-retest reliabilities, internal consistency coefficients, and validity estimates are discussed by Spielberger and colleagues (1983). Test-retest reliabilities range from .16 to .62 for the State Anxiety form. The changing nature of state anxiety may partially explain these lower reliability estimates. Test-retest reliabilities for the Trait Anxiety form range from .65 to .86. The median internal consistency coefficient is .93 for the
State Anxiety form and .90 for the Trait Anxiety form. Concurrent validity estimates for the STAI Trait Anxiety form range from .73 to .85 as compared to other measures of anxiety. As for discriminate validity, the STAI is unrelated to intelligence or academic achievement (Spielberger et al., 1983). In this study, the Cronbach alpha coefficient for the State Anxiety form was .94 and .92 for the Trait Anxiety form.

Procedure

After receiving permission from the Human Subjects Institutional Review Board (HSIRB) from Western Michigan University (WMU) to conduct the proposed study (Appendix A), I obtained a list of all programs accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP) from the CACREP website (http://www.cacrep.org/directory/directory.cfm). (The population of programs was limited to those listed on CACREP’s website as of January 25, 2011). The following programs were eligible for inclusion in this study: clinical mental health counseling; college counseling; community counseling; marital, couple, and family counseling; and mental health counseling. These programs were selected because they typically maintain a “therapy” focus, whereas other programs, such as school counseling for example, may be structured differently. Online CACREP programs were not included in this study for similar reasons. A list of 40 randomly selected programs was generated via a randomization procedure available through SPSS. I obtained contact information for each program from the CACREP website. I then checked all of the program websites to ensure that the contact person listed on the CACREP website was also the program coordinator. If there was a discrepancy, the information found on the program website was used. I then informed each program coordinator via email that his/her program had
been randomly selected for inclusion in this study (Appendix E). An informed consent document with electronic signature capability (Appendix F) was attached to the introductory email. Within the informed consent document, the purpose, procedures, risks, benefits, and contact information pertaining to this study were presented. The program coordinators were invited to contact the primary or student investigator with any questions. If interested in participating, the program coordinators were encouraged to electronically sign the informed consent document and email it back to the student investigator. Those who were not interested in the study were encouraged to indicate this via email. In the original proposal, program specific information (i.e., type of educational format, number of students admitted per year, number of times admissions occur annually, time to degree, and grade point average and/or Graduate Records Examination requirements for admission) was also going to be collected from program coordinators via a 10 minute telephone interview. Furthermore, they were going to be asked to classify their programs as cohort versus non-cohort. (The program coordinator “interview” was piloted with a program coordinator at Western Michigan University).

After a one week period of time, only one program coordinator responded to the initial email stating that he was not interested in participating. The remaining program coordinators did not respond at all. Due to the low response rate, I asked for and received permission from the HSIRB to contact each program coordinator by telephone in order to remind him/her about the study. The majority of program coordinators were not available; thus, I left a message encouraging them to respond to the email. Due to the low response rate once again, my committee and I decided to bypass collecting information from the program coordinators. Upon approval from the HSIRB, individuals listed on the
CACREP website as program contacts were asked to forward the call for participants now containing the survey link directly to their students enrolled in the randomly selected master’s level program (Appendix G). In order to ensure an adequate number of responses, the HSIRB approved this researcher’s request that 40 additional CACREP programs be randomly selected for inclusion in this study.

After two months of data collection, only 26 surveys were completed. Given this low response rate, I asked for and received permission from the HSIRB to randomly select an additional 80 programs for inclusion in this study. During the first round, some program contacts indicated that they did not maintain students’ email addresses; instead, the department chair maintained these lists. Thus, this researcher asked for and received permission from the HSIRB to send the next 80 emails directly to the department chairs in round two (Appendix H). To further ensure an adequate number of responses, I asked for and received permission from the HSIRB to email the call for participants to approximately 30 department chairs from the original 80 randomly selected programs. I also asked for and received permission to recruit from two CACREP approved programs at my home institution. I recruited participants from my home institution due to historically low response rates and confidence that my department chair would support my research and forward the call for participants to the relevant students enrolled here at Western Michigan University. I sent reminder emails containing the survey link to the program contacts and department chairs approximately one month after the recruitment emails were sent (Appendix N & Appendix O). In summary, a total of 162 CACREP-approved programs were invited to participate in this study. Because it is impossible to know which program contacts or department chairs forwarded the survey link to their
students or how many students at those sites received the email, it is not possible to calculate the survey return rate.

**Data Collection Process**

Before sending the call for participants, I transferred the following documents to a web-based survey tool (i.e., Survey Monkey): informed consent, background questionnaire, Counseling Self-Estimate Inventory (COSE, L. M. Larson et al., 1992), Counselor Activity Self-Efficacy Scales (CASES, Lent, Hill, & Hoffman, 2003), and the State Trait Anxiety Inventory (STAI, Spielberger et al., 1983). For those students who clicked on the Survey Monkey link, the informed consent document was presented (Appendix I) outlining the purpose of the study, procedures, risks and benefits, nature of participation (i.e., voluntary participation and right to withdraw with no prejudice), and issues related to confidentiality. As for the purpose of the study, potential participants were informed that the researchers were interested in “learning more about the predictors of counselor self-efficacy for master’s level counseling students enrolled in Council for Accreditation of Counseling and Related Educational Programs (CACREP) programs.” Contact information for the primary and student investigator was provided within the email and the informed consent document in case participants had any questions about the study. Those who choose to participate after reading the informed consent document were able to indicate their consent electronically. The background questionnaire and the three instruments were presented only after consent was electronically provided.

In order to control for random responding, validity items were utilized. For example, one item that read, “Do not respond to this item” was imbedded in each of the self-efficacy measures. If a response was made on any of those items, the respondent was
disqualified and the corresponding data were not included in the analysis. In addition to these stipulations, participants had to indicate their level of experience, level of training, perceived difficulty of practicum or “internship” placement if applicable, and type of educational program on the background questionnaire. If they did not, an error message was displayed and they were re-directed to the question. This requirement was important given that these four variables were being considered as predictors of counselor self-efficacy. Data was exported to a Microsoft Excel document, de-identified, and then transferred to SPSS for analysis.

**Design and Proposed Analyses**

**Preliminary analyses.** Given the research question, a correlational research design was appropriate. Given that gender, race/ethnicity, sexual orientation, family of origin socioeconomic status, level of experience, level of training, and practicum or “internship” status are nominal variables, frequencies and percentages were calculated for each group as well as for the entire sample. In addition, descriptive statistics (i.e., means, standard deviations, and ranges) were calculated for age, state anxiety, trait anxiety, counselor self-efficacy, and perceived difficulty of practicum or “internship” placement for each group (i.e., cohort and non-cohort) as well as for the entire sample. In order to fully describe the sample, Chi-square tests were used to determine whether there were any differences between the two groups (i.e., cohort versus non-cohort) in regards to gender, race/ethnicity, sexual orientation, family of origin socioeconomic status, level of experience, level of training, and practicum or “internship” status. Two independent samples t-tests were used to determine whether there were any differences in age or perceived difficulty of practicum or “internship” placement between the two groups.
Finally, a one-way ANOVA was used to determine whether there was any difference in trait anxiety between the two groups. I did not expect that there would be any significant difference between the two groups on trait anxiety given this is a stable characteristic that is likely to be equally distributed across individuals regardless of educational format.

Pearson product-moment correlation coefficients were calculated among all of the quantitative predictor variables (i.e., level of experience, level of training, state anxiety, trait anxiety, and perceived difficulty of practicum or “internship” placement) in order to assess multicollinearity. According to Grimm and Yarnold (1995), multicollinearity can cause partial regression coefficients to become unstable and increase standard error rates. If multicollinearity is found, predictor variables will be combined or eliminated.

**Main analyses.** In order to test whether the educational format will contribute significant variance to counselor trainees’ self-efficacy scores above and beyond level of experience, level of training, state anxiety, trait anxiety, and perceived difficulty of practicum or “internship” placement (Hypothesis 1), two hierarchical multiple regression analyses were conducted. In the first step, level of experience, level of training, state anxiety, trait anxiety, and perceived difficulty of practicum or “internship” placement were entered into the regression equation. These variables were entered in the first step because they are based on theory and previous empirical findings. In the second step, the type of educational format was added to the regression analysis to determine if there would be a significant change in $R^2$. Independent contributions of each predictor variable were examined. The first regression equation was calculated for the COSE total score and the second regression equation was calculated for the CASES total score. (See Figure 1).
In order to test whether there was a significant difference between the two groups (i.e., cohort versus non-cohort) with regards to counselor self-efficacy (Hypothesis 1a), two one-way analyses of variance (ANOVAs) were conducted (i.e., one for the COSE and one for the CASES). Hypothesis 2 was tested by conducting another one-way ANOVA in order to determine whether there was a significant difference between the two groups with regards to state anxiety. Hypothesis 3 was tested by calculating two Pearson product-moment correlation coefficients (i.e., one for the COSE and one for the CASES) to determine whether there was a significant relationship between practicum or “internship” status and counselor self-efficacy. Because four ANOVAs were performed on the same data, the probability of a Type I error increased to .20 (.05 X 4). Thus, a Bonferroni adjusted alpha level of .01 (.05/4) was used in order to protect against Type I errors.
CHAPTER IV
RESULTS

Introduction

This chapter contains five sections. In the first section, I will fully describe the final sample in terms of gender, race/ethnicity, sexual orientation, family of origin socioeconomic status, age, level of experience, level of training, and practicum or "internship" status. I will also provide information regarding state anxiety scores, trait anxiety scores, counselor self-efficacy scores, and perceived difficulty of practicum or "internship" placement. In the second section, I will present a correlation matrix containing all of the quantitative predictor and criterion variables and discuss significant relationships. Furthermore, I will assess for multicollinearity among the predictor variables. In the last three sections, I will address each research hypothesis separately, starting with the first hypothesis and ending with the third hypothesis.

Descriptive Statistics

Of the total sample, most participants identified as female (89; 85.6%), followed by male (14; 13.5%), and then non-conforming (1; 1%). These trends held constant when the sample was divided by educational format. The majority of participants identified as Caucasian/White/Non-Hispanic (82; 78.8%), followed by Hispanic/Latino (10; 9.6%), African American/Black/Non-Hispanic (5; 4.8%), Asian American/Pacific Islander (4; 3.8%), and Multiracial (3; 2.9%). When divided into cohort and non-cohort groups, there was some variability in frequencies for each category. Of the total sample, 98 (94.2%) participants identified as heterosexual, 4 (3.8%) as bisexual, and 2 (1.9%) as lesbian.
These trends held constant when the sample was divided by educational format, although in the non-cohort group, there was an equal number of participants who identified as bisexual and lesbian. Most participants described their family of origin’s socioeconomic status as middle class (81; 77.9%), followed by low class (18; 17.3%) and upper class (4; 3.8%). These trends held constant when the sample was divided by educational format. (See Table 1 for a separation of statistics by educational format).

Overall, the mean age of participants was 31.66 (SD = 10.70) with a range of 21 to 62. In the non-cohort group, the mean age was 33.55 (SD = 11.67) with a range of 22 to 62. In the cohort group, the mean age was 27.70 (SD = 6.94) with a range of 21 to 46. One participant from each group did not indicate their age.

Beyond demographic variables, status variables were also examined. Of the total sample, 28 (26.9%) participants had no experience in the human services field prior to initial enrollment, 57 (54.8%) had 1-5 years, 15 (14.4%) had 6-10 years, and 4 (3.8%) had 11+ years. These trends held constant when the sample was divided by educational format. Twenty-two (21.2%) participants completed 0-12 credits in their current master’s program, 24 (23.1%) completed 13-24 credits, 15 (14.4%) completed 25-36 credits, 19 (18.3%) completed 37-48 credits, 22 (21.2%) completed 49-60 credits, and 2 (1.9%) completed 61+ credits. These statistics represent a relatively equal spread across the number of credit hours, with the exception of the last category (i.e., 61+ credits). This relatively equal spread remains when the sample is divided by educational format.

Regarding one’s practicum or “internship” status, 48 (46.2%) participants were not yet
Table 1

*Frequency Data for Demographic Characteristics of Sample by Educational Format*

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Cohort</th>
<th></th>
<th>Non-cohort</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>30</td>
<td>88.2%</td>
<td>59</td>
<td>84.3%</td>
<td>89</td>
<td>85.6%</td>
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<tr>
<td>Male</td>
<td>3</td>
<td>8.8%</td>
<td>11</td>
<td>15.7%</td>
<td>14</td>
<td>13.5%</td>
</tr>
<tr>
<td>Non-conforming</td>
<td>1</td>
<td>2.9%</td>
<td>0</td>
<td>0%</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Caucasian/White/Non-Hispanic</td>
<td>30</td>
<td>88.2%</td>
<td>52</td>
<td>74.3%</td>
<td>82</td>
<td>78.8%</td>
</tr>
<tr>
<td>African</td>
<td>1</td>
<td>2.9%</td>
<td>4</td>
<td>5.7%</td>
<td>5</td>
<td>4.8%</td>
</tr>
<tr>
<td>American/Black/Non-Hispanic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
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<td>5.7%</td>
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<td>3.8%</td>
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<tr>
<td>American/Pacific Islander</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>2</td>
<td>5.9%</td>
<td>8</td>
<td>11.4%</td>
<td>10</td>
<td>9.6%</td>
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<tr>
<td>Multiracial</td>
<td>1</td>
<td>2.9%</td>
<td>2</td>
<td>2.9%</td>
<td>3</td>
<td>2.9%</td>
</tr>
<tr>
<td><strong>Sexual Orientation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterosexual</td>
<td>30</td>
<td>88.2%</td>
<td>68</td>
<td>97.1%</td>
<td>98</td>
<td>94.2%</td>
</tr>
<tr>
<td>Lesbian</td>
<td>1</td>
<td>2.9%</td>
<td>1</td>
<td>1.4%</td>
<td>2</td>
<td>1.9%</td>
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<tr>
<td>Bisexual</td>
<td>3</td>
<td>8.8%</td>
<td>1</td>
<td>1.4%</td>
<td>4</td>
<td>3.8%</td>
</tr>
<tr>
<td><strong>Socioeconomic Status of Family</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>8</td>
<td>23.5%</td>
<td>10</td>
<td>14.3%</td>
<td>18</td>
<td>17.3%</td>
</tr>
<tr>
<td>Middle</td>
<td>25</td>
<td>73.5%</td>
<td>56</td>
<td>80%</td>
<td>81</td>
<td>77.9%</td>
</tr>
<tr>
<td>Upper</td>
<td>1</td>
<td>2.9%</td>
<td>3</td>
<td>4.3%</td>
<td>4</td>
<td>3.8%</td>
</tr>
</tbody>
</table>

enrolled in their first practicum, 15 (14.4%) were enrolled in their first practicum, 10 (9.6%) were finished with their first practicum, but not yet enrolled in their second
practicum or “internship,” 22 (21.2%) were enrolled in their second practicum or “internship,” and 9 (8.7%) were finished with their second practicum or “internship.” These trends held constant when the sample was divided by educational format, although in the non-cohort group, there was an equal number of participants who were finished with their first practicum but not yet enrolled in their second practicum or “internship” and those who were finished with their second practicum or “internship.” (See Table 2 for a separation of statistics by educational format).

Participants were also asked to rate the difficulty of their practicum or “internship” placement on a five-point Likert-type scale ranging from 1 (not difficult) to 5 (very difficult). The overall mean rating for practicum or “internship” difficulty was 3.46 (SD = .65) with a range of 2 to 4. For those enrolled in cohort programs, the mean rating was 3.52 (SD = .68) with a range of 2 to 4. Finally, for those enrolled in non-cohort programs, the mean rating was 3.41 (SD = .63) with a range of 2 to 4. It is important to note that only 50 participants answered this item.

Chi-square tests were used to determine whether there were any differences between the two groups (i.e., cohort versus non-cohort) with regards to gender, race/ethnicity, sexual orientation, family of origin socioeconomic status, level of experience, level of training, and practicum or “internship” status. The three assumptions required for Chi-square tests were met: independence of observations, mutually exclusive categories, and a large sample size (Kirk, 2008). Given that some cells contained less than 4 observations, Fisher’s Exact Test was the most appropriate test to use. For all seven variables, Fisher’s Exact Test yielded a value of 1.000, which is highly insignificant. Thus, there were no significant differences between the two groups with
regards to gender, race/ethnicity, sexual orientation, family of origin socioeconomic status, level of experience, level of training, or practicum or “internship” status.

Table 2

*Frequency Data for Status Characteristics of Sample by Educational Format*

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Cohort</th>
<th></th>
<th>Non-cohort</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>Level of Experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>7</td>
<td>20.6%</td>
<td>21</td>
<td>30%</td>
<td>28</td>
<td>26.9%</td>
</tr>
<tr>
<td>1-5 years</td>
<td>23</td>
<td>67.6%</td>
<td>34</td>
<td>48.6%</td>
<td>57</td>
<td>54.8%</td>
</tr>
<tr>
<td>6-10 years</td>
<td>4</td>
<td>11.8%</td>
<td>11</td>
<td>15.7%</td>
<td>15</td>
<td>14.4%</td>
</tr>
<tr>
<td>11+ years</td>
<td>0</td>
<td>0%</td>
<td>4</td>
<td>5.7%</td>
<td>4</td>
<td>3.8%</td>
</tr>
<tr>
<td>Level of Training</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-12 credits</td>
<td>4</td>
<td>11.8%</td>
<td>18</td>
<td>25.7%</td>
<td>22</td>
<td>21.2%</td>
</tr>
<tr>
<td>13-24 credits</td>
<td>11</td>
<td>32.4%</td>
<td>13</td>
<td>18.6%</td>
<td>24</td>
<td>23.1%</td>
</tr>
<tr>
<td>25-36 credits</td>
<td>4</td>
<td>11.8%</td>
<td>11</td>
<td>15.7%</td>
<td>15</td>
<td>14.4%</td>
</tr>
<tr>
<td>37-48 credits</td>
<td>7</td>
<td>20.6%</td>
<td>12</td>
<td>17.1%</td>
<td>19</td>
<td>18.3%</td>
</tr>
<tr>
<td>49-60 credits</td>
<td>7</td>
<td>20.6%</td>
<td>15</td>
<td>21.4%</td>
<td>22</td>
<td>21.2%</td>
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<tr>
<td>61+ credits</td>
<td>1</td>
<td>2.9%</td>
<td>1</td>
<td>1.4%</td>
<td>2</td>
<td>1.9%</td>
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<tr>
<td>Practicum or “Internship” Status</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not yet enrolled</td>
<td>11</td>
<td>32.4%</td>
<td>37</td>
<td>52.9%</td>
<td>48</td>
<td>46.2%</td>
</tr>
<tr>
<td>Enrolled in first practicum</td>
<td>6</td>
<td>17.6%</td>
<td>9</td>
<td>12.9%</td>
<td>15</td>
<td>14.4%</td>
</tr>
<tr>
<td>Finished with first practicum</td>
<td>5</td>
<td>14.7%</td>
<td>5</td>
<td>7.1%</td>
<td>10</td>
<td>9.6%</td>
</tr>
<tr>
<td>Enrolled in second practicum</td>
<td>8</td>
<td>23.5%</td>
<td>14</td>
<td>20%</td>
<td>22</td>
<td>21.2%</td>
</tr>
<tr>
<td>Finished with second practicum or “internship”</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>11.8%</td>
<td>5</td>
<td>7.1%</td>
<td>9</td>
<td>8.7%</td>
</tr>
</tbody>
</table>
An independent samples t-test did not reveal a significant difference between the practicum or "internship" difficulty ratings of those enrolled in cohort versus non-cohort programs \( (p = .77) \). In contrast, however, an independent samples t-test revealed a significant difference in age between those enrolled in cohort versus non-cohort educational formats. Specifically, those enrolled in non-cohort programs were significantly older than those enrolled in cohort programs \( (p = .009) \).

Examination of STAI state anxiety scores for the total sample revealed a mean of 32.98. For those enrolled in cohort programs, the mean score was 33.26 and for those enrolled in non-cohort programs, the mean score was 32.84. Higher scores indicate higher levels of anxiety. (See Table 3 for the standard deviations and ranges of STAI state anxiety scores). The difference between the two groups (i.e., cohort versus non-cohort) was tested with a one-way ANOVA and I will present the results when Hypothesis 2 is discussed below.

The overall mean score for STAI trait anxiety was 34.07. For those enrolled in cohort programs, the mean score was 33.18 and for those enrolled in non-cohort programs, the mean score was 34.50. Higher scores indicate higher levels of anxiety. (See Table 3 for the standard deviations and ranges of STAI trait anxiety scores). A one-way ANOVA was used to test whether differences in trait anxiety exist between the two groups (i.e., cohort versus non-cohort). Before the results of this analysis are presented, I will address the underlying assumptions of ANOVA. First, despite unequal sample sizes, the variances were relatively equal. Second, it can be assumed that the observations were independent of one another given the nature of data collection. Third, a test of normality (Shapiro-Wilk = .959; \( p = .003 \)) and examination of a histogram indicated that the STAI
trait anxiety scores were positively skewed. The size of the skew, however, was not enough to violate the assumption of normality. As anticipated, there were no differences between the two groups with regards to STAI trait anxiety ($F = .540; p = .464$).

Of the total sample, the mean counselor self-efficacy score on the COSE was 167.16. For those enrolled in cohort programs, the mean score was 165.85 and for those enrolled in non-cohort programs, the mean score was 167.80. The mean score on the CASES was 271.50. For those enrolled in cohort programs, the mean score was 277.26 and for those enrolled in non-cohort programs, the mean score was 268.69. Higher scores on both measures indicate higher levels of counselor self-efficacy. (See Table 3 for the standard deviations and ranges). Two one-way ANOVAs were used to test whether differences exists between the two groups (i.e., cohort versus non-cohort) with regards to counselor self-efficacy. I will present the results of these analyses when Hypotheses 1a is discussed below.

**Correlational Data**

A correlation matrix with correlation coefficients for the COSE, CASES, STAI-S, STAI-T, perceived difficulty of practicum or “internship” placement, level of training, and level of experience can be found in Table 4. Examination of the table reveals that the COSE and the CASES were significantly related to all of the other variables at the .01 level except for perceived difficulty of practicum or “internship.” Considering the direction of these statistically significant relationships, counselor self-efficacy was positively correlated with level of training and level of experience, yet negatively correlated with both state and trait anxiety. In other words, the higher the level of training and experience, the higher the counselor self-efficacy scores and vice versa. The higher
Table 3

Descriptive Statistics by Educational Format

<table>
<thead>
<tr>
<th>Educational Format</th>
<th>Cohort</th>
<th></th>
<th></th>
<th></th>
<th>Non-Cohort</th>
<th></th>
<th></th>
<th></th>
<th>Total</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Range</td>
<td>M</td>
<td>SD</td>
<td>Range</td>
<td>M</td>
<td>SD</td>
<td>Range</td>
<td>M</td>
<td>SD</td>
<td>Range</td>
</tr>
<tr>
<td>STAI-S</td>
<td>33.26</td>
<td>10.60</td>
<td>21-75</td>
<td>32.84</td>
<td>10.46</td>
<td>20-66</td>
<td>32.98</td>
<td>10.46</td>
<td>20-75</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAI-T</td>
<td>33.18</td>
<td>7.63</td>
<td>20-51</td>
<td>34.50</td>
<td>9.05</td>
<td>21-61</td>
<td>34.07</td>
<td>8.59</td>
<td>20-61</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CASES</td>
<td>277.26</td>
<td>51.16</td>
<td>143-364</td>
<td>268.69</td>
<td>53.94</td>
<td>147-365</td>
<td>271.50</td>
<td>52.95</td>
<td>143-365</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. STAI-S = State Trait Anxiety Inventory-State Anxiety form (range of scores = 20-80); STAI-T = State Trait Anxiety Inventory-Trait Anxiety form (range of scores = 20-80); COSE = Counseling Self-Estimate Inventory (range of scores = 37-222); CASES = Counselor Activity Self-Efficacy Scales (range of scores = 0-369).*

The counselor self-efficacy scores, the lower the anxiety scores and vice versa. It can also be noted that the correlation between the COSE and the CASES was statistically significant (.01 level) in the positive direction, indicating good convergent validity between the two measures. STAI state anxiety and STAI trait anxiety were positively correlated with one another at the .01 level, but were not significantly correlated with level of training or perceived difficulty of practicum or "internship" placement. STAI trait anxiety was negatively correlated with level of experience at the .05 level, but STAI state anxiety was not. Perceived difficulty of practicum or "internship" placement was not significantly correlated with any of the other variables. Level of training and level of experience were both significantly correlated with counselor self-efficacy (i.e., the COSE and the CASES) as mentioned above.
Table 4

**Correlation Matrix for the COSE, CASES, STAI-S, STAI-T, Perceived Difficulty of Practicum or “Internship” Placement, Level of Training, and Level of Experience**

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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</thead>
<tbody>
<tr>
<td>1. COSE</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. CASES</td>
<td>.83**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. STAI-S</td>
<td>-.54**</td>
<td>-.44**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. STAI-T</td>
<td>-.53**</td>
<td>-.47**</td>
<td>.59**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Difficulty</td>
<td>-.25</td>
<td>-.25</td>
<td>.14</td>
<td>.13</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Training</td>
<td>.28**</td>
<td>.30**</td>
<td>-.03</td>
<td>-.10</td>
<td>-.06</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>7. Experience</td>
<td>.28**</td>
<td>.29**</td>
<td>-.10</td>
<td>-.21*</td>
<td>-.27</td>
<td>.09</td>
<td>1</td>
</tr>
</tbody>
</table>

*Note.* COSE = Counseling Self-Estimate Inventory (range of scores = 37-222); CASES = Counselor Activity Self-Efficacy Scales (range of scores = 0-369); STAI-S = State Trait Anxiety Inventory-State Anxiety form (range of scores = 20-80); STAI-T = State Trait Anxiety Inventory-Trait Anxiety form (range of scores = 20-80); Difficulty = Perceived difficulty of practicum or “internship” placement (range of scores = 1-5); Training = number of courses completed (range = 0-61+ credits); Experience = years of experience in human services field prior to initial enrollment (range = 0-11+ years).

* *p < .05.
** **p < .01.

Table 4 can also be examined for multicollinearity among the predictor variables. According to Grimm and Yarnold (1995), correlations exceeding .80 are problematic. Examination of the correlation matrix does not reveal any multicollinearity among the predictor variables. The high correlation (r = .83) between the CASES and the COSE is exempt from this examination because these measures are being examined as separate criterion variables.
Examination of Results by Hypothesis

**Hypothesis 1.** The first hypothesis was that educational format will contribute significant variance to counselor trainees’ self-efficacy scores above and beyond the variance explained by level of experience, level of training, state anxiety, trait anxiety, and perceived difficulty of practicum or “internship” placement. In order to test the null hypothesis, two hierarchical multiple regression equations were performed: one for the COSE and one for the CASES. In the first step, level of experience, level of training, state anxiety, trait anxiety, and perceived difficulty of practicum or “internship” placement were entered into each equation. Educational format (coded as 1 for cohort and 0 for non-cohort) was entered as the second step in each regression equation. Participants’ scores on the COSE were used as the criterion variable for the first equation and scores on the CASES were used as the criterion variable for the second equation.

Examination of the results revealed a large increase in the standard error after the 5th variable (i.e., perceived difficulty of practicum or “internship” placement) was entered into each regression equation. When this occurs, it is usually indicative of severe multicollinearity (i.e., intercorrelations among the predictor variables). Under such circumstances, the beta coefficients become unstable and unreliable, meaning that it is impossible to determine the direct effects of the predictor variables. Thus, the beta coefficients should not be interpreted. Grimm and Yarnold (1995) recommend either combining or eliminating predictor variables when there is severe multicollinearity among the predictor variables. I decided to eliminate the 5th variable given that only 50 participants out of 104 provided a response for its corresponding item on the background questionnaire.
Prior to discussing the results of the regression analyses, I will present findings pertaining to whether the assumptions of multiple regression were met. A plot of the residual errors, a histogram, and a normal probability plot were used to assess for the following assumptions about random errors: (a) the probability distribution of random errors has a mean of zero, (b) there is constant variance among the random errors, (c) the probability distribution of random errors is normal, and (d) each random error is independent of every other random error (Pardoe, 2006). Linearity among the predictor variables (Grimm & Yarnold, 1995) was also assessed. A visual examination of the residual plot indicated that the random errors were symmetrically distributed about the middle of the plot, suggesting a mean of zero. In addition, the variance appeared to be equal and constant moving from the left to the right. The random errors appeared to be normally distributed as evidenced by the bell-shaped histogram and data points positioned closely to the straight line in the middle of the normal probability plot. Nonrandom patterns in the residual plot were not detected, which is indicative of independence. Finally, a curvilinear relationship among the variables was not found upon examination of the residual plot. Now that the assumptions have been supported, I will present the results of the main analyses.

After removing the problematic 5th variable discussed above, level of experience, level of training, state anxiety, and trait anxiety were entered into the first step of each regression equation. Type of educational format (i.e., cohort versus non-cohort) was entered into the second step. Step one accounted for 44.3% of the variance in COSE scores, which was statistically significant ($F = 19.645; p = .000$). Step one in the second regression equation accounted for 36.7% of the variance in CASES scores, which was
also statistically significant ($F = 14.361; p = .000$). The change in $R^2$ was insignificant at step two for the COSE scores ($F = 15.780; p = .433$), only accounting for a $R^2$ change of .4%. The change in $R^2$ was also insignificant at step two for the CASES scores ($F = 11.519; p = .498$), only accounting for a $R^2$ change of .3%. See Tables 5 and 6 for model summary information. Given these results, the null hypothesis must be retained.

In addition to model summary information, independent contributions of each variable can be examined. The beta coefficients for level of experience, level of training, STAI state anxiety, and STAI trait anxiety were all statistically significant in each regression equation. Thus, all of these variables made statistically significant and unique contributions to the criterion variable(s). In contrast, the beta coefficient for educational format was not statistically significant in either regression equation.

Table 5

*Hierarchical Multiple Regression Analysis Predicting COSE Scores from Level of Experience, Level of Training, State Anxiety, Trait Anxiety, and Educational Format*

<table>
<thead>
<tr>
<th>Model</th>
<th>$\Delta R^2$</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience</td>
<td>.443***</td>
<td>.161*</td>
</tr>
<tr>
<td>Training</td>
<td></td>
<td>.229**</td>
</tr>
<tr>
<td>STAI-S</td>
<td></td>
<td>-.348***</td>
</tr>
<tr>
<td>STAI-T</td>
<td></td>
<td>-.279**</td>
</tr>
<tr>
<td>Step 2</td>
<td>.004</td>
<td>-.060</td>
</tr>
<tr>
<td>Educational Format</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. COSE = Counseling Self-Estimate Inventory (range of scores = 37-222); Experience = years of experience in human services field prior to initial enrollment (range = 0-11+); Training = number of courses completed (range = 0-61+); STAI-S = State Trait Anxiety Inventory-State Anxiety form (range of scores = 20-80); STAI-T = State Trait Anxiety Inventory-Trait Anxiety form (range of scores = 20-80); Educational Format = cohort membership.*

* $p \leq .05$.
** $p \leq .01$.
*** $p \leq .001$. 
Table 6

Hierarchical Multiple Regression Analysis Predicting CASES Scores from Level of Experience, Level of Training, State Anxiety, Trait Anxiety, and Educational Format

<table>
<thead>
<tr>
<th>Model</th>
<th>AR²</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience</td>
<td>.367***</td>
<td>.192*</td>
</tr>
<tr>
<td>Training</td>
<td>.250**</td>
<td></td>
</tr>
<tr>
<td>STAI-S</td>
<td>- .270**</td>
<td></td>
</tr>
<tr>
<td>STAI-T</td>
<td>- .246*</td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational Format</td>
<td>.003</td>
<td>.055</td>
</tr>
</tbody>
</table>

Note. CASES = Counselor Activity Self-Efficacy Scales (range of scores = 0-369); Experience = years of experience in human services field prior to initial enrollment (range = 0-11+); Training = number of courses completed (range = 0-61+); STAI-S = State Trait Anxiety Inventory-State Anxiety form (range of scores = 20-80); STAI-T = State Trait Anxiety Inventory-Trait Anxiety form (range of scores = 20-80); Educational Format = cohort membership.

* p < .05.
** p < .01.
*** p < .001.

When squared, the part correlation coefficients reveal the amount of variance that can be explained by each predictor variable. For the COSE, state anxiety explained 7.8% of the variance, followed by level of training (5.2%), trait anxiety (4.8%), and level of experience (2.5%). For CASES scores, a somewhat different pattern emerged: level of training explained 6.3% of the variance, followed by state anxiety (4.6%), trait anxiety (4%), and level of experience (3.4%).

Hypothesis 1a. This hypothesis predicted that counselor trainees enrolled in cohort educational programs will demonstrate significantly higher counselor self-efficacy scores as compared to those enrolled in non-cohort educational programs. Two one-way analyses of variance (ANOVAs) were used to test the null hypothesis. Before examining the results, I will consider the underlying assumptions of ANOVA. First, despite unequal
sample sizes, there was still homogeneity of variance for both the COSE and the CASES. Second, because Survey Monkey only allowed one attempt per IP address, it is highly likely that the observations were independent of one another. Third, a test of normality (Shapiro-Wilk = .978; \( p = .074 \)) and examination of a histogram indicated that the COSE scores were normally distributed. In contrast, the CASES scores were not normally distributed (Shapiro-Wilk = .972; \( p = .025 \)) and had a slight negative skew. The size of the skew, however, was not enough to violate the assumption of normality. (Results of the one-way ANOVAs for both the COSE and the CASES can be found in Table 7).

Table 7

One-Way ANOVAs for the COSE and the CASES at Two Levels of Educational Format

<table>
<thead>
<tr>
<th>Source for COSE</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>86.756</td>
<td>1</td>
<td>86.756</td>
<td>.145</td>
<td>.705</td>
</tr>
<tr>
<td>Within Groups</td>
<td>61187.465</td>
<td>102</td>
<td>599.877</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>61274.221</td>
<td>103</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source for CASES</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1684.287</td>
<td>1</td>
<td>1684.287</td>
<td>.598</td>
<td>.441</td>
</tr>
<tr>
<td>Within Groups</td>
<td>287109.703</td>
<td>102</td>
<td>2814.801</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>288793.990</td>
<td>103</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. COSE = Counseling Self-Estimate Inventory (range of scores = 37-222); CASES = Counselor Activity Self-Efficacy Scales (range of scores = 0-369).

The \( p \)-value did not reach significance for either the COSE (\( F = .145; \ p = .705 \)) or the CASES (\( F = .598; \ p = .441 \)). Thus, the null hypothesis must be retained: there is no difference in counselor self-efficacy for those enrolled in cohort versus non-cohort educational programs.
Hypothesis 2. The second hypothesis predicted that counselor trainees enrolled in cohort educational programs will demonstrate significantly lower levels of state anxiety as compared to those enrolled in non-cohort educational programs. A one-way ANOVA was employed to test the null hypothesis. I will consider the three underlying assumptions of ANOVA before the results are revealed. First, despite unequal sample sizes, there was still homogeneity of variance. Second, it can be assumed that the observations were independent of one another given the nature of data collection. Third, a test of normality (Shapiro-Wilk = .910; \( p = .000 \)) and examination of a histogram indicated that the STAI state anxiety scores were positively skewed. For this variable, the size of the skew was large enough to violate the assumption of normality. According to Kirk (2008), however, the \( F \) test in ANOVA is robust with respect to violations of normality. Results of the ANOVA can be found in Table 8. The null hypothesis must be retained given that the \( p \)-value did not reach significance (\( F = .037; p = .848 \)) Thus, there appears to be no significant difference in state anxiety for those enrolled in cohort versus non-cohort educational programs.

Table 8

One-Way ANOVA for the STAI-S at Two Levels of Educational Format

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>4.072</td>
<td>1</td>
<td>4.072</td>
<td>.037</td>
<td>.848</td>
</tr>
<tr>
<td>Within Groups</td>
<td>11259.889</td>
<td>102</td>
<td>110.391</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11263.962</td>
<td>103</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. STAI-S = State Trait Anxiety Inventory- State Anxiety form (range of scores = 20-80).
Hypothesis 3. The third hypothesis predicted that there will be a significant correlation between practicum or “internship” status and counselor self-efficacy. To test the null hypothesis, two Pearson product-moment correlation coefficients were calculated. The correlation between participants’ COSE scores and practicum or “internship” status ($r = .229$) was statistically significant at the $p \leq .01$ level (1-tailed). Similarly, the correlation between participants’ CASES scores and practicum or “internship” status ($r = .283$) was statistically significant at the $p \leq .01$ level (1-tailed). Thus, the null hypothesis can be rejected as there is a significant relationship between counselor self-efficacy and practicum or “internship” status.

In summary, most participants in this study were Caucasian/White/Non-Hispanic, middle class, heterosexual females. The two groups (i.e., cohort and non-cohort) were relatively equal with regards to demographic and status variables, except for those enrolled in non-cohort educational programs were significantly older than those enrolled in cohort educational programs. In this study, counselor self-efficacy was positively correlated with level of experience and level of training, yet negatively correlated with both state and trait anxiety. Educational format did not contribute significant variance to counselor trainees’ self-efficacy scores above and beyond the variance explained by level of experience, level of training, state anxiety, and trait anxiety. However, level of experience, level of training, state anxiety, and trait anxiety all contributed significant and unique variance to counselor self-efficacy scores. In contrast to what was predicted, those enrolled in cohort educational programs did not have significantly higher self-efficacy or significantly lower state anxiety than those enrolled in non-cohort educational programs.
There was, however, a significant relationship found between practicum or "internship" status and counselor self-efficacy as predicted.
CHAPTER V
DISCUSSION

Introduction

This chapter contains four sections. In the first section, I will discuss, interpret, and compare the means and correlations of the relevant variables to prior findings. I will then discuss and compare the results of each hypothesis to research in the relevant area. In the last three sections, I will describe the study’s limitations, research and training implications, and future research directions, respectively.

Discussion of Results

Preliminary analyses. The STAI manual (Spielberger et al., 1983) provides normative information for high school students, college students, working adults, medical patients, psychiatric patients, military recruits, and prison inmates. Since there are no norms for master’s level counselor trainees, the closest reference group for comparison is working adults given that the mean age of participants in this study was 31.66. According to Spielberger and colleagues, the mean STAI state anxiety score for working adults (both male and female) is 35.46 and the mean STAI trait anxiety score is 34.84. The mean score for STAI state anxiety in this study was 32.98 and 34.07 for STAI trait anxiety. Thus, it appears that the average trait anxiety scores for participants in this study and working adults are relatively equal. There is a small difference, however, between the state anxiety scores of participants in this study and working adults. It is possible that those who enter the counseling profession are better able to manage their anxiety in the
moment; however, making such a comparison must be done with caution given that there is no way to test whether this difference is significant or meaningful.

At the time the COSE was developed and validated, L. M. Larson and colleagues (1992) found a mean COSE score of 141.71 among individuals with master’s degrees in counseling psychology. The mean COSE score for master’s level counselor trainees in this study was 167.16. The difference between these means is quite striking and somewhat counter-intuitive (trainees’ scores are higher than counselors’ scores). One possible explanation is that over the course of 19 years, training resources and technology have improved, allowing for increases in skill development and thus counselor self-efficacy scores. Alternatively, it is possible that self-efficacy may decrease once one obtains employment and encounters more challenging clients without the opportunity to receive regular supervision. Yet another explanation may be related to the large number of participants in this study who were not yet enrolled in their first practicum. It is possible that these participants may have over-estimated their self-efficacy. A relatively recent study conducted by Fernando and Hulse-Killacky (2005) found a mean COSE score of 166.64 among master’s level counselor trainees, which is much closer to the mean found in this study. Again, any comparison must be done tentatively given that there is no way to test whether this differences is significant or meaningful. Examination of the variables in this present study indicate that COSE scores increase with level of training and level of experience and decrease with levels of STAI state and trait anxiety and perceived difficulty of practicum or “internship” placement.
While developing the CASES, Lent and colleagues (2003) found a mean CASES score of 6.05 (sum of all items divided by number of items) among individuals enrolled in undergraduate and graduate courses in counseling or psychology-related programs. In this study, a mean score of 6.62 (271.50/41) was found, close to what Lent and colleagues reported. Similar to the COSE, CASES scores increase with level of training and level of experience and decrease with levels of STAI state and trait anxiety and perceived difficulty of practicum or “internship” placement.

A correlation matrix was constructed using the following variables: the COSE, the CASES, STAI state anxiety, STAI trait anxiety, perceived difficulty of practicum or “internship” placement, level of training, and level of experience. I will discuss each variable and its significant relationships with the other variables in turn. In addition, I will compare and contrast findings from this study with findings from related studies.

In this study, statistically significant relationships were found between the COSE and all other variables except for perceived difficulty of practicum or “internship” placement. Lent and colleagues (2003) also found a statistically significant relationship between the COSE and the CASES ($r = .76$). Interestingly, a slightly higher correlation between the COSE and the CASES was found ($r = .83$) in this study. Either way, these correlations are indicative of good convergent validity between the COSE and the CASES. Other researchers have also found that the COSE has a significant negative correlation with STAI state anxiety (Barbee et al., 2003; Daniels, 1997; L. M. Larson et al., 1992) and STAI trait anxiety (Kocarek, 2001; L. M. Larson et al., 1992). These findings suggest that as self-efficacy increases, anxiety decreases and vice versa. A
significant positive relationship between the COSE and level of training (Kocarek, 2001; L. M. Larson et al., 1992; Rushlau, 1998) and between the COSE and level of experience (L. M. Larson et al., 1992) have been found in prior studies. Kocarek (2001) did not find a significant relationship between the COSE and level of paraprofessional experience, but this could be influenced by the fact that nearly half of her participants did not have any paraprofessional experience. Overall, these findings suggest that counselor self-efficacy increases with experience and training, which is consistent with Bandura's (1977b) assertion that self-efficacy increases with performance accomplishments.

Similar to the COSE, the CASES also had statistically significant relationships with all of the other variables except perceived difficulty of practicum or “internship” placement. Prior research investigating the relationship between the CASES and amount of completed coursework could not be located. However, a significant relationship between the CASES and level of counseling experience has been reported in prior literature (Harris, 2007; Lent et al., 2003). Thus, it appears that self-efficacy increases as experience increases as Bandura (1977b) suggested. In contrast to the findings of this present study, Clark (2005) did not find a significant relationship between the CASES and STAI state anxiety.

STAI state anxiety had significant relationships with the COSE and the CASES as discussed above. STAI state anxiety was significantly correlated with STAI trait anxiety in the positive direction. The size of the correlation found in this study ($r = .59$) is close to the size found by Spielberger and colleagues (1983) ($r = .65$). According to Spielberger (personal communication, August 31, 2011), however, the size of the
correlation between state and trait anxiety varies widely based on the amount of stress in
the situation under which the scales are administered. Under moderately stressful
conditions in which threats to self-esteem are present, the correlations tend to be higher.
Under neutral or moderately positive conditions, the correlations tend to be lower.

STAI trait anxiety had significant positive relationships with the COSE, the
CASES, and STAI state anxiety as mentioned above. In addition, a significant negative
relationship was found between STAI trait anxiety and level of experience. Kocarek
(2001) did not find this relationship to be significant in her study. One possible
explanation for the significant relationship between trait anxiety and level of experience
is that perhaps individuals with less overall anxiety are more likely to seek out
opportunities in which they are able to help others and/or more willing to participate in a
study such as this.

Hypothesis 1. Educational format did not contribute significant variance to
counselor trainees' self-efficacy scores above and beyond the variance explained by level
of experience, level of training, state anxiety, and trait anxiety. Although educational
format did not contribute significant variance to counselor self-efficacy scores, level of
experience, level of training, state anxiety, and trait anxiety together explained close to
half of the variance in COSE scores and over one-third of the variance in CASES scores.
Furthermore, each variable contributed unique and significant variance to counselor self-
efficacy. The 5th predictor variable, perceived difficulty of practicum or "internship"
placement, was removed from the analysis due to severe multicollinearity. It is difficult
to determine the cause of this multicollinearity, especially since the correlation matrix did
not reveal multicollinearity among the predictor variables. However, it is possible that a truncated range and/or a low response rate for this variable may be responsible. Nevertheless, results from this study confirm previous findings that level of experience (Melchert et al., 1996; Watson, 1992), level of training (Melchert et al., 1996; Watson, 1992), and anxiety (Alvarez, 1995; Daniels, 1997; Hall, 2009) are predictive of counselor self-efficacy.

**Hypothesis 1a.** There was no difference in counselor self-efficacy for those enrolled in cohort versus non-cohort educational programs. This finding is very surprising given that cohort membership has been linked to cohesiveness, support, risk-taking, self-esteem, and professional confidence (e.g., Drago-Severson et al., 2001; Norris & Barnett, 1994; Potthoff et al., 2001, Yerkes et al., 1995a). Perhaps an improved classification method would have made a difference. Relying on students to classify their programs correctly may have been problematic. Even though “cohort” was defined clearly on the background questionnaire, classification may have been more accurate if the program contacts, coordinators, or department chairs classified their own programs as originally planned. The low response rate from the program coordinators, however, made relying on them for classification unrealistic given the time constraints for completing a dissertation.

Another explanation for the insignificant finding is that those enrolled in non-cohort educational programs form their own “cohorts” or “learning communities” among peers in order to cultivate support and encouragement throughout the program. Perhaps students in non-cohort educational formats feel more freedom to move beyond their peers
and form relationships with advanced students, using them as role models and sources of encouragement. Maybe these student-formed groups serve the same purpose and have the same benefits as administratively-formed groups known as cohorts. As with many groups, it is always possible that there are more within-group differences than between-group differences. Thus, there may be other variables impacting the relationship between cohort membership and counselor self-efficacy. For example, could it be possible that characteristics of the environment (e.g., degree of support versus competition, amount of peer collaboration, faculty involvement) mediate or moderate the relationship between educational format and counselor self-efficacy? As noted in the literature, there are some challenges associated with cohorts (e.g., dominant personalities, “cliques,” unequal group participation) that may detract from the benefits.

A third explanation for the lack of significant results is that one’s unique characteristics may determine the relationship between cohort membership and self-efficacy. For example, in this study, those enrolled in non-cohort educational programs were significantly older than those enrolled in cohort educational programs. This may be due to the fact that I recruited participants from Western Michigan University (WMU), the host of two non-cohort counseling programs. Because of my affiliation with the department, it is possible that many students recognized my name and decided to participate, leading to a disproportionate amount of participants from WMU. At WMU, there are more non-traditional and part-time students pursuing master’s degrees in counseling than there are traditional-aged students. Therefore, could it be possible that these non-traditional students (who tend to be older) already have social support systems
and a sense of community established? Thus, they may already experience very similar benefits as traditional-aged students enrolled in cohort programs. In other words, for younger people, a cohort format may help increase counselor self-efficacy due to the amount of social support, verbal persuasion, collaboration, and interpersonal safety, but for older adults, these benefits may already exist through outside sources of support. If this is the case, educational format would function more as a mediator between age and counselor self-efficacy.

A fourth explanation is that the very nature of counselor training programs transcends the format in which training is delivered. Regardless of educational format, counselor training programs already require risk-taking, cohesiveness and trust among students, appreciation of individual differences, awareness of one’s beliefs and values, faith in one’s abilities, and deeper discussions of difficult topics, all of which were discussed by Norris and Barnett (1994) and Basom and colleagues (1996) as being forms of individual and group development. I will provide suggestions for future research pertaining to the above-mentioned possibilities in a later section.

**Hypothesis 2.** No significant difference in STAI state anxiety was found between those enrolled in cohort versus non-cohort educational programs. Reasoning for the alternative form of this hypothesis was based on the prediction that those enrolled in cohort programs would have higher self-efficacy and thus lower state anxiety than those enrolled in non-cohort programs (Hypothesis 1a). A post-hoc analysis revealed that there was a significant negative relationship between age and state anxiety. As mentioned above, it may be possible that a disproportionate number of older, non-traditional
students from WMU comprised the non-cohort group. If so, the composition of the non-cohort group may have impacted the relationship between state anxiety and educational format. Unfortunately, because there is no existing literature investigating the relationship between state anxiety and educational format, no comparisons can be made.

**Hypothesis 3.** A significant positive correlation between practicum or "internship" status and counselor self-efficacy (as measured by both the COSE and the CASES) was found. In other words, as students advance in their practica sequence, their counselor self-efficacy increases. Other researchers have also found significant positive relationships between practicum status and counselor self-efficacy (Friedlander & Snyder, 1983; Kocarek, 2001; Rushlau, 1998). These findings make sense given the significant positive relationship between experience and counselor self-efficacy found throughout the literature. If counselor self-efficacy increases with number of practicum placements, it may be beneficial for counselor educators to ensure students obtain as much practicum experience as possible throughout their training.

**Limitations**

In this section, I will discuss threats to external validity, internal validity, construct validity, and statistical conclusion validity. One threat to external validity is that the sample was no longer random after I decided to recruit from my home institution due to low response rates. In addition, the results of this study are limited to master's level counselor trainees enrolled in programs accredited by CACREP. Only students enrolled in these programs were investigated to minimize extraneous variables related to the training environment. Despite this, it may be possible to generalize the results to
programs that are "CACREP equivalent," meaning that they meet all or most stipulations of CACREP, but do not have formal endorsement through the accrediting body. Another potential threat to external validity is related to the high probability that not all program contacts or department chairs forwarded the survey link to their students. Therefore, self-selection bias may have occurred, thereby influencing the results. Furthermore, it was impossible to calculate the return rate or to know which programs participated. Finally, the majority of participants in this study were Caucasian/White/Non-Hispanic, heterosexual, middle class females, making it difficult to generalize findings across more diverse populations.

There are several potential threats to internal validity. First, participants’ self-efficacy responses may have been influenced by temporal events, such as recent interactions with a client or supervisor. For example, if recent events were positive (e.g., receiving supportive feedback, witnessing client improvement), counselor self-efficacy scores may be inflated. On the other hand, if recent events were negative (e.g., receiving critical or non-supportive supervision), counselor self-efficacy scores may be understated. Despite this possibility, there is no reason why there would be any systematic differences between the two groups of participants in regards to recent supervisory experiences. Second, web-based research is known to have some disadvantages. For example, web-based research can be very susceptible to random responding and/or false responding (W. C. Schmidt, 1997). Thus, validity check items were added to help guard against these potential threats. Third, presentation of the measures was not randomized; thus, order effects may have occurred. For example, it is
possible that the state anxiety scores were slightly inflated since the self-efficacy measures were administered first. Fourth, because the design was correlational in nature, no causal interpretations may be drawn regarding the predictors of counselor self-efficacy or the impact of cohort versus non-cohort educational programs on counselor self-efficacy.

One threat to construct validity is that the data was only collected at one point in time in a mono-method (i.e., self-report) fashion. This method is not sensitive to changes over time or free from subjective biases. Two additional threats to construct validity are compensatory rivalry (i.e., competition between those from a cohort program and those from a non-cohort program) and hypothesis-guessing among the participants. I tried to limit these threats by not revealing the hypotheses of the study before data collection. In addition, allowing participants to classify their programs may have been problematic (e.g., misinterpretation of the criteria); thus, it may have been more beneficial for program contacts, coordinators, or department chairs to classify their own programs based on a series of questions. (This was the original plan, but was not possible to implement given extremely low response rates from the program coordinators). Although there was a significant relationship between practicum or "internship" status and counselor self-efficacy, it would have been more illuminating to ask participants how many client contact hours they have accumulated. This is important because some students may acquire a large number of contact hours during their practicum, whereas other students may acquire a smaller number of hours. Understanding the differences in
counselor self-efficacy scores based on client contact hours may help practicum instructors and students choose placements that will optimize their training experiences.

Threats to statistical conclusion validity include violations of assumptions and Type I error resulting from the multiple number of analyses performed on the same data. In order to ensure statistical assumptions were met, specification error was reduced by limiting predictor variables to those supported by theory and previous empirical studies. Measurement error was controlled by using measures with good reliability and validity. Furthermore, the assumptions of multiple regression, ANOVA, and Chi-square were checked and determined to be satisfied before the analyses were conducted. To reduce Type I error resulting from the four ANOVAs, the alpha level was adjusted from .05 to .01. Finally, because there was severe multicollinearity among the predictor variables, the problematic variable (i.e., perceived difficulty of practicum or “internship” placement) was removed from the analysis. The perceived difficulty variable may have been problematic due to a low response rate and/or a truncated range. In addition, the low response rate for this variable may have contributed to a Type II error in that there was no significant relationship found between perceived difficulty and counselor self-efficacy.

Research and Training Implications

As discussed, the results of this study were very consistent with past research findings. In particular, this study supported that level of experience, level of training, state anxiety, and trait anxiety are all significant predictors of counselor self-efficacy (e.g., Alvarez, 1995; Daniels, 1997; Hall, 2009; Melchert et al., 1996; Watson, 1992). This provides additional support for Bandura’s (1977a, 1977b, 1982, 1989b) assertions
that performance accomplishments and emotional arousal (i.e., anxiety) impact levels of self-efficacy. Although vicarious experiences and verbal persuasion were not explicitly examined in this study, it can be assumed that these components are present within the training environment.

Self-efficacy is an important construct to examine given its impact on goal-setting, amount of expended effort, perseverance in the face of obstacles, approach and avoidance behavior, and emotional responses (Bandura, 1977a, 1982, 1989a). Thus, the higher the counselor self-efficacy, the more likely the counselor will approach counseling tasks, set higher goals, expend effort, persist in counseling behaviors, and recover from setbacks. Bandura (1982) found that for counselors, self-efficacy is positively correlated with performance and negatively correlated with anxiety. Authors besides Bandura have found that self-efficacy is positively correlated with counseling performance, whereas anxiety is negatively correlated with counseling performance (e.g., Friedlander et al., 1986; E. Johnson et al., 1989). Other authors have found that there is a significant and positive relationship between counselor self-efficacy and client outcome (Orlinsky et al., 1994; Orlinsky & Howard, 1986). For these reasons alone, counselor self-efficacy is a very important construct for supervisors, training directors, and educators to understand and to foster among counselor trainees.

In this study, state anxiety and level of training accounted for the most variance in counselor self-efficacy. Because state anxiety and level of training contributed the most variance to counselor self-efficacy, it is important for supervisors and educators to provide plenty of opportunities for mastery experiences (e.g., modeling, role plays, mock
counseling sessions, practicum experiences) and help their trainees maintain a level of anxiety optimal for performance. Daniels (1997) found that positive feedback tends to reduce anxiety levels whereas negative feedback tends to increase anxiety levels. In addition to providing positive feedback when warranted, supervisors should provide structure, direct information, and specific advice for beginning trainees in order to reduce anxiety and ambiguity (Stoltenberg & McNeill, 2010). In situations in which one’s self-efficacy is higher than one’s skill set, it may be helpful to review the audio or videotaped session together so that the trainee can share with the supervisor his/her self-evaluation. It is possible that the trainee may be attending to superficial components of the counseling session, so supervision directed toward what actually constitutes an effective session may be in order (L.M. Larson & Daniels, 1998). Another possibility is that the trainee may be guarding against feelings of incompetence (L. M. Larson & Daniels, 1998). In such situations, it may be necessary to facilitate exploration of these feelings in supervision so that the trainee may move toward a more accurate self-assessment.

In general, L. M. Larson and Daniels (1998) recommend that supervisors help trainees see their anxiety as challenging rather than debilitating, focus on the changeable and positive aspects of performance, and attend to relevant and critical aspects of feedback. Supervisors need to be aware of their supervisee’s developmental level and provide interventions and feedback appropriate to that level (Stoltenberg & McNeill, 2010). Helping trainees focus on their performance accomplishments will reinforce mastery experiences and at the same time provide verbal persuasion and encouragement (Kocarek, 2001). In enhancing counselor self-efficacy, supervisors may draw from the
SCT model, attending to such things as stable counselor characteristics, personal agency, performance, and the supervision/work environment (L. M. Larson & Daniels, 1998). Utilizing this framework may provide structure and guidance for both the supervisor and the trainee.

**Future Research Directions**

As highlighted above, this study could be improved if the department chairs, program coordinators, or program contacts would have classified their own programs as cohort or non-cohort based on a series of standardized questions. This would have eliminated the potential for misinterpretation on the part of the student participants. If further clarification was needed, the researcher could have responded to the department chair in the moment. Unfortunately, this method was not possible in the present study due to very low response rates. Another potential improvement to this study would be to define and measure perceived difficulty of practicum or “internship” placement differently. For example, perhaps it would be better to measure perceived difficulty by how many clients are on one’s caseload, presenting concerns and/or diagnoses, and type of clinical setting (e.g., inpatient versus outpatient). A simple improvement would be to expand the Likert-type scale from 1-5 to 1-10 as to avoid a truncated range.

Most research studies regarding cohort educational formats have been conducted in the context of business, medical, law, and educational administration programs; thus, more research regarding educational formats in counselor training programs is warranted. Beyond quantitative studies, it may be worthwhile to examine the impact of cohort educational formats via a qualitative analysis. In such a study, counselor trainees may be
asked about perceived benefits and drawbacks to a cohort educational format. They may also be asked whether they believe the cohort format impacts their counselor self-efficacy, and if so, in what ways. In addition, a qualitative study could allow for a deeper exploration of all the ways that a cohort format may impact counselor trainees. Beyond studying students enrolled in cohort programs, it may be useful to determine whether students in non-cohort formats form their own “cohorts” or “learning communities,” thereby acquiring the same benefits as those enrolled in administratively formed cohorts. Again, a qualitative study may provide the most comprehensive and rich answer to this question.

Other areas of future research may concentrate on trying to understand more of the factors that impact counselor self-efficacy. In this study, 44.3% of the variance was explained when using the COSE as the criterion variable. Naturally, this means that 56.7% of the variance is not accounted for. L. M. Larson and Daniels (1998) suggest that within the SCT model, personal agency variables (such as outcome expectancies and other forms of emotional arousal) and additional elements of the supervision/work environment be investigated. Future researchers may wish to investigate variables that may serve as moderators or mediators between educational format and counselor self-efficacy. As mentioned above, the unique contributions of students or certain environmental components may be playing a larger role in this relationship than realized in the present study.

Additional efficacy studies regarding how to increase counselor self-efficacy are needed. Perhaps it would be even more useful to understand which interventions are the
most appropriate based on developmental level (L. M. Larson & Daniels, 1998). Finally, the link between counselor self-efficacy and counseling performance needs to be strengthened. As discussed in Chapter II, there is an abundance of mixed results. One way to counter this problem is to eliminate some of the extraneous variables by conducting longitudinal studies in which performance is measured along with changes in counselor self-efficacy (L. M. Larson & Daniels, 1998). This is an important link to make, as it will further justify the importance of self-efficacy among counselor trainees.

In summary, this study confirmed prior findings that level of experience, level of training, state anxiety, and trait anxiety are significant predictors of counselor self-efficacy. Furthermore, a significant relationship between practicum or “internship” status and counselor self-efficacy was discovered and this relationship transcends educational format. This finding further supports the connection between experience, performance accomplishments, and self-efficacy. Counselor educators and supervisors must work to ensure students are able to reduce and/or control anxiety that interferes with performance, receive proper training, and acquire sufficient practicum experiences. As mentioned multiple times, counselor self-efficacy has been linked to client outcome; thus, it is important that trainees are provided the opportunities and support needed to ensure their development as effective practitioners.
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APPENDIX A

HSIRB Approval Letter
Date: December 17, 2010

To: Eric Sauer, Principal Investigator
Regina Meyer, Student Investigator for dissertation

From: Amy Naugle, Ph.D., Chair

Re: HSIRB Project Number: 10-12-12

This letter will serve as confirmation that your research project titled “Predictors of Counselor Self-Efficacy among Master’s Level Counselor Trainees: Impact of a Cohort versus Non-Cohort Training Model” has been approved under the expedited category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you may only conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: December 17, 2011
APPENDIX B

Approval Letter for the COSE
February 9, 2011

Regina Meyer
5200 Croyden Ave. 5202A
Kalamazoo, MI 49009

Ms. Meyer,

Thank you for your recent purchase of The Counseling Self-Estimate Inventory (COSE). I am happy to grant you permission to use the instrument for one year for one study. If this is a dissertation, please include sample items in your appendix of your dissertation; do not reproduce the entire scale.

I have attached a hard copy of the instrument and a list of references in which the COSE has been used. The instructions read for people to indicate their answers on the instrument. An alternative that we are doing is to use answer sheets so the inventories can be reused. Also there is no place for the person to indicate demographics and identification. You need to include this on a separate sheet of your own design.

The following items on the COSE are reverse scored: Items 2, 6, 7, 9, 16, 18, 19, 21, 22, 23, 24, 26, 27, 28, 31, 33, 35, 36, & 37.

The factors consist of the following items:

Factor 1: Microskills: Items 1, 3, 4, 5, 8, 10, 11, 12, 14, 17, 32, 34.

Factor 2: Counseling Process: Items 6, 9, 16, 18, 19, 21, 22, 23, 31, 33.


Factor 4: Cultural Competence: Items 29, 30, 36, 37.

Factor 5: Values: Items 2, 7, 13, & 35.

I recommend use of the total score rather than the factor scores separately. I have also included some reliability information and validity information for you regarding the measure.

Best wishes in your research endeavors.

Warmly,

Lisa M. Larson, Ph. D.
3243 Evergreen Road
Ames, IA 50014
APPENDIX C

Approval Letter for the CASES
Hi Regina,

Thanks for your kind words.

You have my permission to use the CASES in your research. I have enclosed a measurement guide that may be of some use to you.

Please share your dissertation abstract with me once you have completed the study.

Best wishes,
Bob Lent

-----Original Message-----
From: Regina Lynn Meyer [mailto:regina.l.meyer@wmich.edu]
Sent: Monday, January 24, 2011 8:49 AM
To: boblent@wam.umd.edu
Subject: Permission to use CASES

Dear Dr. Lent,

It is an honor to be writing an email to you. Your work has greatly inspired my studies in counseling psychology. I am currently a fourth year doctoral student studying at Western Michigan University in Kalamazoo, Michigan. For my dissertation, I am looking at predictors of counselor self-efficacy among master's level students. Above and beyond some of the stronger predictors, I am adding type of training model (cohort vs. non-cohort) to the analysis. I am writing to ask your permission to use the Counselor Activity Self-Efficacy Scales (CASES) for my dissertation research. If you would like a copy of my introduction, I would be happy to provide it electronically. Thank you so much for your time. I am certainly looking forward to hearing from you.

Sincerely,

Regina Meyer, M.A.
APPENDIX D

Approval Letter for the STAI
To whom it may concern,

This letter is to grant permission for the above named person to use the following copyright material;

Instrument: *State-Trait Anxiety Inventory for Adults*

Authors: Charles D. Spielberger, in collaboration with R.L. Gorsuch, G.A. Jacobs, R. Lushene, and P.R. Vagg

Copyright: 1968, 1977 by Charles D. Spielberger for his/her thesis research.

Five sample items from this instrument may be reproduced for inclusion in a proposal, thesis, or dissertation.

The entire instrument may not be included or reproduced at any time in any other published material.

Sincerely,

Robert Most
Mind Garden, Inc.
www.mindgarden.com
APPENDIX E

Introductory Email for Program Coordinators of Randomly Selected Programs
Greetings, I am a fourth-year counseling psychology doctoral student at Western Michigan University and I am completing a dissertation regarding the predictors of counselor self-efficacy among master’s level students enrolled in Council for Accreditation of Counseling and Related Educational Programs (CACREP). Your [specific] program has been randomly selected as a potential site for data collection. If you are not interested in this study, an email indicating so would be greatly appreciated.

If you are interested in learning more about this study, please read the informed consent document attached below. Please email me (regina.l.meyer@wmich.edu) or my faculty advisor (eric.sauer@wmich.edu) with any questions that may arise. If you would like to participate in this study, please electronically sign the informed consent document and email it back to me.

Upon receiving the informed consent document, I will contact you via telephone in order to ask you a few questions about your program. For example, I will ask how many students are admitted annually, how many times admission occurs annually, how long it takes most students to graduate after initial enrollment, and if there are minimum grade point average and/or GRE score requirements for admission (and if so, what these minimum requirements are). Next, I will send you an email with a link to the questionnaires that can be forwarded to your students. Thank you for your time and I look forward to speaking with you.

Sincerely,

Regina Meyer, MA
Ph.D. Candidate
Western Michigan University
APPENDIX F

Informed Consent: Program Coordinators
Title: Predictors of Counselor Self-Efficacy among Master’s Level Counselor Trainees
Principal Investigator: Eric Sauer, Ph.D.
Student Investigator: Regina Meyer, MA

Purpose
The researchers are interested in learning more about the predictors of counselor self-efficacy for master’s level counseling students enrolled in Council for Accreditation of Counseling and Related Educational Programs (CACREP) programs. In order to participate, your program must be accredited by CACREP. Eligible student participants must be enrolled in a CACREP master’s level counseling program. Please read this document all the way through before agreeing to participate.

Procedures
If you are interested in allowing your site to participate in this research, you will be asked to read and electronically sign this informed consent document. After signing this document, the researcher will conduct a 10-minute interview with you via telephone in order to classify your program as a cohort or non-cohort training model and to collect additional information about your program. Next, the researcher will send you a link that can be distributed to students in one of your master’s level programs. If they would like to participate, they will be asked to click on the link that will then direct them to an online website that allows for data collection. First, potential student participants will be provided with an informed consent document. They will be encouraged to contact the primary or student investigator should they have any questions. If they choose to participate, they will be able to electronically indicate their consent. They will then be invited to complete a demographic questionnaire, two measures of counselor self-efficacy, and one measure of anxiety. Demographic information is being collected for descriptive and comparison purposes. Information about the student participants will be de-identified and collected data will be stored in a secure, password-protected location (SPSS). The estimated amount of time needed to complete the instruments is 25 to 30 minutes.

Risks
There are some risks associated with participation in this study. Participating in this study requires your time and may be considered an inconvenience. If you find that any of the questions upset you, you have a right not to answer them. You may also discontinue your participation at any time for any reason without penalty.

Benefits
Some training programs find that participating in programmatic research allows them to learn more about their program, reflect upon their training environment, and see things
from a new perspective. You may or may not benefit in this way. The primary benefit of your participation is to help us learn more about the predictors of counselor self-efficacy. This information may also have implications for training practices and could directly benefit the training directors, educators, and supervisors who work with counselor trainees.

Voluntary Participation and Withdrawal
Your participation in this research is strictly voluntary and you are under no obligation to participate. You have the right to drop the participation of your site from this study at any point in time without prejudice or penalty.

Confidentiality
All data will be de-identified. Thus, your names, the names of the student participants, and the specific name of your site will not be connected to your/their responses. Furthermore, if this study is published or presented at any professional conferences, your name, the names of the student participants, and the specific name of your site will not be included in the presentation of results. In addition, your participation in this research study will not be shared with anyone external to this research project, nor will any of your responses. All data will be stored in a secure, password-protected location (Statistical Package for the Social Sciences-SPSS). Furthermore, all electronic data (to be stored on a jump drive) and paper data (i.e., informed consent documents, your responses to my questions) will be stored in a locked cabinet located in the primary investigator’s office. In accordance with federal laws and the Ethical Principles of Psychologists and Code of Conduct, data will be retained for at least 5 years after the study has been completed or published. Your privacy will be protected to the maximum extent allowable by law.

Contact Persons
If you have any questions about this study, please contact Dr. Eric Sauer at (616) 771-4171 or eric.sauer@wmich.edu or Regina Meyer at regina.l.meyer@wmich.edu. If you should desire a copy of the results once the study is complete, please let Regina know. You may also contact the chair of the WMU Human Subjects Institutional Review Board at (269) 387-8293 or the Vice President of Research at (269) 387-8298 if questions or problems arise during the course of the study. This consent document was approved by the Western Michigan University Human Subjects Institutional Review Board (HSIRB) on December 17, 2010. Do not participate after December 17, 2011.

Copy of Consent Form
You may print and keep a copy of this consent form. If you have read the contents of this form and are willing to volunteer your site for this research, please sign your electronic signature by clicking in the box below. After clicking in the box below, please save and send back to Regina Meyer at regina.l.meyer@wmich.edu.

☐ Electronic Signature  Date: ________________
APPENDIX G

Introductory Email for Program Contacts
of Randomly Selected Programs
Greetings, I am a fourth-year counseling psychology doctoral student at Western Michigan University and I am completing a dissertation regarding the predictors of counselor self-efficacy among master’s level students enrolled in Council for Accreditation of Counseling and Related Educational Programs (CACREP). Your [specific] program has been randomly selected as a potential site for data collection. This study was approved by the Western Michigan University Human Subjects Institutional Review Board on December 17, 2010.

If you have any questions about this study, please email me (regina.l.meyer@wmich.edu) or my faculty advisor (eric.sauer@wmich.edu). If you do not wish to contact me or my advisor first, would you please forward the following email (see below) to your students currently enrolled in the [specific] program? If you are not the program contact or do not have the authority to forward recruitment emails directly to your students, please forward this entire email to the individual authorized to do so. Thank you for your time and consideration.

Sincerely,

Regina Meyer, MA
Ph.D. Candidate
Western Michigan University

Email for the Students:

Greetings, I am a fourth-year counseling psychology doctoral student at Western Michigan University who is interested in the predictors of counselor self-efficacy. Counselor self-efficacy can be defined as “a counselor’s beliefs or judgments about his or her capacities to effectively counsel a client in the near future” (Larson & Daniels, 1998, p. 180). The purposes of this study are: (a) to examine the construct of counselor self-efficacy within the social cognitive theory (SCT) framework and (b) to build upon existing literature regarding the most significant predictors of counselor self-efficacy. This study was approved by the Western Michigan University Human Subjects Institutional Review Board on December 17, 2010.

In order to participate in this study, you must be enrolled in the master’s level [specific] counseling program accredited by CACREP. If you meet this criterion and are interested in this study, please click the link below, and read the informed consent document. Please email any further questions you may have to the primary or student investigator at eric.sauer@wmich.edu or regina.l.meyer@wmich.edu, respectively. If you are still interested in participating, please provide your consent and complete the instruments that follow. Completion of the instruments will take approximately 25 to 30 minutes of your time. Thank you for your consideration and if you should decide to participate, thank you for your contribution to this very important area of research.
If you are interested in this study, please follow this link to the informed consent document: https://www.surveymonkey.com/s/counselorselfefficacy The password is: spring

Sincerely,

Regina Meyer, MA
Ph.D. Candidate
Western Michigan University

For Those I’ve Already Contacted:

Greetings, I am a fourth-year counseling psychology doctoral student at Western Michigan University and I am completing a dissertation regarding the predictors of counselor self-efficacy among master’s level students enrolled in Council for Accreditation of Counseling and Related Educational Programs (CACREP). Your [specific] program has been randomly selected as a potential site for data collection. This study was approved by the Western Michigan University Human Subjects Institutional Review Board on December 17, 2010.

If you have any questions about this study, please email me (regina.l.meyer@wmich.edu) or my faculty advisor (eric.sauer@wmich.edu). If you do not wish to contact me or my advisor first, would you please forward the following email (see below) to your students currently enrolled in the [specific] program? (In order to expedite the data collection process, I am no longer collecting data from the training directors or program coordinators). If you are not the program contact or do not have the authority to forward recruitment emails directly to your students, please forward this entire email to the individual authorized to do so. Thank you for your time and consideration.

Sincerely,

Regina Meyer, MA
Ph.D. Candidate
Western Michigan University

Email for the Students:

Greetings, I am a fourth-year counseling psychology doctoral student at Western Michigan University who is interested in the predictors of counselor self-efficacy. Counselor self-efficacy can be defined as “a counselor’s beliefs or judgments about his or her capacities to effectively counsel a client in the near future” (Larson & Daniels, 1998, p. 180). The purposes of this study are: (a) to examine the construct of counselor self-efficacy within the social cognitive theory (SCT) framework and (b) to build upon
existing literature regarding the most significant predictors of counselor self-efficacy. This study was approved by the Western Michigan University Human Subjects Institutional Review Board on December 17, 2010.

In order to participate in this study, you must be enrolled in the master’s level [specific] counseling program accredited by CACREP. If you meet this criterion and are interested in this study, please click the link below, and read the informed consent document. Please email any further questions you may have to the primary or student investigator at eric.sauer@wmich.edu or regina.l.meyer@wmich.edu, respectively. If you are still interested in participating, please provide your consent and complete the instruments that follow. Completion of the instruments will take approximately 25 to 30 minutes of your time. Thank you for your consideration and if you should decide to participate, thank you for your contribution to this very important area of research.

If you are interested in this study, please follow this link to the informed consent document: https://www.surveymonkey.com/s/counselorselfefficacy The password is: spring

Sincerely,

Regina Meyer, MA
Ph.D. Candidate
Western Michigan University
APPENDIX H

Introductory Email for Department Chairs
of Randomly Selected Programs
Greetings, I am a fourth-year counseling psychology doctoral student at Western Michigan University and I am completing a dissertation regarding the predictors of counselor self-efficacy among master’s level students enrolled in Council for Accreditation of Counseling and Related Educational Programs (CACREP). One of your CACREP programs has been randomly selected as a potential site for data collection. This study was approved by the Western Michigan University Human Subjects Institutional Review Board on December 17, 2010 (see attached).

If you have any questions about this study, please email me (regina.l.meyer@wmich.edu) or my faculty advisor (eric.sauer@wmich.edu). If you do not wish to contact me or my advisor first, would you please forward the following email (see below) to your master’s level counselor trainees? **If you do not have access to the students’ email addresses or believe that another faculty member in your department would be better suited to distribute this call for participants, please forward this entire email to that individual.** Thank you for your time and consideration.

Sincerely,

Regina Meyer, MA
Ph.D. Candidate
Western Michigan University

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**Email for the Students:**

Greetings, I am a fourth-year counseling psychology doctoral student at Western Michigan University who is interested in the predictors of counselor self-efficacy. Counselor self-efficacy can be defined as “a counselor’s beliefs or judgments about his or her capacities to effectively counsel a client in the near future” (Larson & Daniels, 1998, p. 180). The purposes of this study are: (a) to examine the construct of counselor self-efficacy within the social cognitive theory (SCT) framework and (b) to build upon existing literature regarding the most significant predictors of counselor self-efficacy. This study was approved by the Western Michigan University Human Subjects Institutional Review Board on December 17, 2010.

In order to participate in this study, you must be enrolled in the master’s level [specific] program accredited by CACREP. If you meet this criterion and are interested in this study, please click the link below, and read the informed consent document. Please email any further questions you may have to the primary or student investigator at eric.sauer@wmich.edu or regina.l.meyer@wmich.edu, respectively. If you are still interested in participating, please provide your consent and complete the instruments that follow. Completion of the instruments will take approximately 15 to 20 minutes of your time. Thank you for your consideration and if you should decide to participate, thank you for your contribution to this very important area of research.
If you are interested in this study, please follow this link to the informed consent document: https://www.surveymonkey.com/s/counselorselfefficacy The password is: spring

Sincerely,

Regina Meyer, MA
Ph.D. Candidate
Western Michigan University
APPENDIX I

Informed Consent: Student
Title: Predictors of Counselor Self-Efficacy among Master’s Level Counselor Trainees
Principal Investigator: Eric Sauer, Ph.D.
Student Investigator: Regina Meyer, MA

Purpose
The researchers are interested in learning more about the predictors of counselor self-efficacy for master’s level counseling students enrolled in Council for Accreditation of Counseling and Related Educational Programs (CACREP) programs. Eligible student participants must be enrolled in a CACREP master’s level counseling program. Please read this document all the way through before agreeing to participate.

Procedures
If you are interested in this study, please read this informed consent document. If you have any further questions, please email the primary or student investigator at eric.sauer@wmich.edu or regina.l.meyer@wmich.edu, respectively. If you are still interested in participating, please indicate your willingness to participate by clicking the "yes" box below. After indicating consent, you will be permitted to complete the measures. Specifically, you will be asked to complete a demographic questionnaire, two measures of counselor self-efficacy, and one measure of state anxiety. Demographic information is being collected for exploratory and descriptive purposes. Information about the student participants will be de-identified and collected data will be stored in a secure, password-protected location (Statistical Package for the Social Sciences-SPSS). The estimated amount of time needed to complete the measures is 25 to 30 minutes.

Risks
There are some risks associated with participation in this study. Participating in this study requires your time and may be considered an inconvenience. If you find that any of the questions upset you, you have a right not to answer them. For example, when answering questions pertaining to counselor self-efficacy and anxiety, some minor insecurities or doubts about your ability level may surface. You may discontinue your participation at any time for any reason without penalty.

Benefits
Some people find that answering research questions helps them learn more about themselves, reflect upon their experiences, and see things from a new perspective. You may or may not benefit in this way. The primary benefit of your participation is to help us
learn more about the predictors of counselor self-efficacy. This information may also have implications for training practices and could directly benefit the training directors, educators, and supervisors who work with counselor trainees.

**Voluntary Participation and Withdrawal**

Your participation in this research is strictly voluntary and you are under no obligation to participate. You have the right to drop out of this study at any point in time without prejudice or penalty.

**Confidentiality**

All data will be de-identified and your name will not be connected to any of your responses. Furthermore, if this study is published or presented at any professional conferences, your name will not be included in the presentation of results. In addition, your participation in this research study will not be shared with anyone external to this research project, nor will any of your responses. All data will be stored in a secure, password-protected location (SPSS). Furthermore, all electronic data (to be stored on a jump drive) and paper data (i.e., informed consent documents) will be stored in a locked cabinet located in the primary investigator’s office. In accordance with federal laws and the Ethical Principles of Psychologists and Code of Conduct, data will be retained for at least 5 years after the study has been completed or published. Your privacy will be protected to the maximum extent allowable by law.

**Contact Persons**

If you have any questions about this study, please contact Dr. Eric Sauer at (616) 771-4171 or eric.sauer@wmich.edu or Regina Meyer at regina.l.meyer@wmich.edu. If you should desire a copy of the results once the study is complete, please let Regina know. You may also contact the chair of the WMU Human Subjects Institutional Review Board at (269) 387-8293 or the Vice President of Research at (269) 387-8298 if questions or problems arise during the course of the study. This consent document was approved by the Western Michigan University Human Subjects Institutional Review Board (HSIRB) on December 17, 2010. Do not participate after December 17, 2011.

**Copy of Consent Form**

You may print and keep a copy of this consent form. If you have read the contents of this form and are willing to volunteer for this research, please check the "yes" box below.

After clicking in the "yes" box below, the document will be electronically sent to Regina Meyer.

After reading the informed consent document, do you wish to participate in this study?

☐ Yes  ☐ No
APPENDIX J

Background Questionnaire
Thank you for your interest in this study. Please answer the following questions for descriptive and exploratory purposes.

1. What is the title of your CACREP-accredited program (i.e., community counseling; clinical mental health counseling):

2. Currently, I am:
   (a) Not yet enrolled in my first practicum
   (b) Enrolled in my first practicum
   (c) Finished with my first practicum, but not yet enrolled in my second practicum or "internship"
   (d) Enrolled in my second practicum or "internship"
   (e) Finished with my second practicum or "internship"

3. How many years of paid and/or non-paid experience have you had in the human services field PRIOR to initial enrollment in your current master’s level training program? Human services can be defined as “any program or facilities for meeting the basic needs of a society or group, as of the poor, sick, or elderly.” Examples include volunteering at a homeless shelter, working as a case manager, and answering the phone for crisis or suicide hotlines.
   (a) none
   (b) 1-5 years
   (c) 6-10 years
   (d) 11+ years

4. How many credit hours in your current master’s program have you COMPLETED (i.e., received a final grade for) thus far?
   (a) 0-12
   (b) 13-24
   (c) 25-36
   (d) 37-48
   (e) 49-60
   (f) 61+

5. If applicable, how challenging would you rate your current or most recent practicum or “internship” placement on a scale of 1 (not difficult) to 5 (very difficult)?

6. Age:
7. Gender:
   (a) Male
   (b) Female
   (c) Transgender
   (d) Non-conforming
   (e) Prefer not to answer

8. Race/Ethnicity:
   (a) Caucasian/White/Non-Hispanic
   (b) African American/Black/Non-Hispanic
   (c) Asian American/Pacific Islander
   (d) Hispanic/Latino(a)
   (e) Native American
   (f) Multiracial
   (g) Other

9. Sexual Orientation:
   (a) Heterosexual
   (b) Gay
   (c) Lesbian
   (d) Bisexual
   (e) Other

10. Which socioeconomic status would you use to describe your family of origin?
    (a) Low
    (b) Middle
    (c) Upper

11. Are you a member of an official cohort program?

   In a traditional cohort program, a relatively small number of students are admitted by department faculty once per year and are organized into a group. The department then recognizes the group as an official "cohort." The students in any given cohort not only enter the program together but also proceed through the majority of classes together and generally complete the program as a group.

    (a) Yes
    (b) No
APPENDIX K

Counseling Self-Estimate Inventory (COSE)
This is not a test. There are no right or wrong answers. Rather, it is an inventory that attempts to measure how you feel you will behave as a counselor in a counseling situation. Please respond to the items as honestly as you can so as to most accurately portray how you think you will behave as a counselor. Do not respond with how you wish you could perform each item - rather answer in a way that reflects your actual estimate of how you will perform as a counselor at the present time.

Below is a list of 37 statements. Read each statement, and then indicate the extent to which you agree or disagree with that statement, using the following alternatives:

1 = Strongly Disagree
2 = Moderately Disagree
3 = Slightly Disagree
4 = Slightly Agree
5 = Moderately Agree
6 = Strongly Agree

PLEASE – Put your responses on this inventory by marking your answer to the left of each statement.
1 = Strongly Disagree
2 = Moderately Disagree
3 = Slightly Disagree
4 = Slightly Agree
5 = Moderately Agree
6 = Strongly Agree

1. When using responses like reflection of feeling, active listening, clarification, probing, I am confident I will be concise and to the point.

2. I am likely to impose my values on the client during the interview.

3. When I initiate the end of a session, I am positive it will be in a manner that is not abrupt or brusque and that I will end the session on time.

4. I am confident that I will respond appropriately to the client in view of what the client will express (e.g., my questions will be meaningful and not concerned with trivia and minutia).

5. I am certain that my interpretation and confrontation responses will be concise and to the point.

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APPENDIX L

Counselor Activity Self-Efficacy Scales (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. We are looking for 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 fill in the number that best reflects your response to each question.

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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.

<table>
<thead>
<tr>
<th>No confidence</th>
<th>Some Confidence</th>
<th>Complete Confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>At All</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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
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.

<table>
<thead>
<tr>
<th>No confidence</th>
<th>Some Confidence</th>
<th>Complete Confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>At All</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

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,” we are 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 to resolve his or her issues).

<table>
<thead>
<tr>
<th>No confidence</th>
<th>Some Confidence</th>
<th>Complete Confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>At All</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
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<td>5</td>
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<td>6</td>
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<td>8</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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
APPENDIX M

STAI Form Y-1 and Y-2
**STAI Form Y-1**

Directions: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the number to the right of the statement to indicate how you feel right now, that is, at this moment. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Somewhat</th>
<th>Moderately so</th>
<th>Very much so</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I feel calm</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. I feel secure</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. I am tense</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

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**STAI Form Y-2**

Directions: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the number to the right of the statement to indicate how you generally feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Somewhat</th>
<th>Moderately so</th>
<th>Very much so</th>
</tr>
</thead>
<tbody>
<tr>
<td>21. I feel pleasant</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>22. I feel nervous and restless</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

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APPENDIX N

Reminder Email for Program Contacts
This is a reminder email for your master’s level students who may be interested in participating in this study. If possible, I would appreciate it if you could forward the information below to your students in the [specific] counseling program. If you are not the program contact or do not have the authority to forward recruitment emails directly to your students, please forward this entire email to the individual authorized to do so. Again, thank you for your time and consideration.

Greetings, this is a reminder email regarding the study you were invited to participate in approximately one month ago. I am a fourth-year counseling psychology doctoral student at Western Michigan University who is interested in the predictors of counselor self-efficacy. *If you have already participated in this study, thank you for your time and contribution. Please disregard this email. If you have not yet participated and may be interested in doing so, please continue to read this email.*

Counselor self-efficacy can be defined as “a counselor’s beliefs or judgments about his or her capacities to effectively counsel a client in the near future” (Larson & Daniels, 1998, p. 180). The purposes of this study are: (a) to examine the construct of counselor self-efficacy within the social cognitive theory (SCT) framework and (b) to build upon existing literature regarding the most significant predictors of counselor self-efficacy. This study was approved by the Western Michigan University Human Subjects Institutional Review Board on December 17, 2010.

In order to participate in this study, you must be enrolled in the master’s level [specific] counseling program accredited by CACREP. If you meet this criterion and are interested in this study, please click the link below, and read the informed consent document. Please email any further questions you may have to the student investigator at regina.l.meyer@wmich.edu. If you are still interested in participating, please provide your consent and complete the instruments that follow. Completion of the instruments will take approximately 25 to 30 minutes of your time. Thank you for your consideration and if you should decide to participate, thank you for your contribution to this very important area of research.

If you have not yet participated in this study and are interested in doing so, please follow this link to the informed consent document: [https://www.surveymonkey.com/s/counselorselfefficacy](https://www.surveymonkey.com/s/counselorselfefficacy) The password is: spring

Sincerely,

Regina Meyer, MA
Ph.D. Candidate
Western Michigan University
APPENDIX O

Reminder Email for Department Chairs
This is a reminder email for your master's level counselor trainees who may be interested in participating in my dissertation study regarding the predictors of counselor self-efficacy. If possible, I would greatly appreciate it if you could forward the information below to your currently enrolled students. If you do not have access to the students' email addresses or believe that another faculty member in your department would be better suited to distribute this call for participants, please forward this entire email to that individual. Again, thank you for your time and consideration.

Email for the Students:
Greetings, I am a fourth-year counseling psychology doctoral student at Western Michigan University who is interested in the predictors of counselor self-efficacy. Your [specific] program has been randomly selected as a potential site for data collection. If you have already participated in this study, thank you for your time and contribution. Please disregard this email. If you have not yet participated and may be interested in doing so, please continue to read this email.

Counselor self-efficacy can be defined as “a counselor’s beliefs or judgments about his or her capacities to effectively counsel a client in the near future” (Larson & Daniels, 1998, p. 180). The purposes of this study are: (a) to examine the construct of counselor self-efficacy within the social cognitive theory (SCT) framework and (b) to build upon existing literature regarding the most significant predictors of counselor self-efficacy. This study was approved by the Western Michigan University Human Subjects Institutional Review Board on December 17, 2010 (see attached).

In order to participate in this study, you must be enrolled in the master’s level [specific] program accredited by CACREP. If you meet this criterion and are interested in this study, please click the link below, and read the informed consent document. Please email any further questions you may have to the student investigator at regina.l.meyer@wmich.edu. If you are still interested in participating, please provide your consent and complete the instruments that follow. Completion of the instruments will take approximately 15 to 20 minutes of your time. Thank you for your consideration and if you should decide to participate, thank you for your contribution to this very important area of research.

If you have not yet participated in this study and are interested in doing so, please follow this link to the informed consent document:
https://www.surveymonkey.com/s/counselorselfefficacy The password is: spring

Sincerely,

Regina Meyer, MA
Ph.D. Candidate
Western Michigan University