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**AN EXAMINATION OF SELF-EFFICACY IN MASTER'S
LEVEL COUNSELOR TRAINEES**

by

Matthew G. Rushlau

**A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Doctor of Education
Department of Counselor Education
and Counseling Psychology**

**Western Michigan University
Kalamazoo, Michigan
December 1998**

AN EXAMINATION OF SELF-EFFICACY IN MASTER'S LEVEL COUNSELOR TRAINEES

Matthew G. Rushlau, Ed.D.

Western Michigan University, 1998

This research is an investigation into changes in individuals' belief of self-efficacy as they advanced through master's-level counselor training. Differences were examined between reported levels of beliefs of self-efficacy for a group of 30 master's students involved in counselor practicum training and 31 master's students involved in basic counseling coursework. Participants completed the Counselor Self-Estimate Inventory (COSE) (Larson et al., 1992) at the beginning and end of an academic semester. Data generated by the COSE included an overall score on beliefs of counselor self-efficacy along with five subscale scores of various aspects of counseling, consisting of Micro-Skills, Process, Difficult Client Behaviors, Cultural, and Awareness of Values. The participants also completed two surveys designed to gather demographic information about them. Differences between the practicum and nonpracticum groups were analyzed using an analysis of covariance (ANCOVA) with the researcher controlling for an overall experimental error rate of 5%. Findings indicated that there were statistically significant differences between the practicum and nonpracticum group on the total score of the COSE and on the Micro-Skills and Process subscales. These findings support other research findings that attest to the usefulness of practical training in the development of self-efficacy beliefs.

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ACKNOWLEDGMENTS

I wish to acknowledge the people who contributed to the fulfillment of my doctoral program and dissertation process. First, I wish to honor the work of my dissertation committee members: Dr. Ariel Anderson, Dr. Robert Betz, and Dr. Edward Trembley, my chairperson and advisor. Each of you has been helpful in offering support and wisdom to me and has challenged me to provide my best every step of the way. A few people deserve recognition for contributing to the practical completion of this project. Julie Scott offered intelligent consultation in the statistical analysis and design of this research project. Hope Smith provided valuable assistance with the final formatting of the dissertation. Kate Holaday deserves special recognition for her invaluable editorial advice and for her friendship throughout my doctoral program.

I also acknowledge my friends and colleagues, Dr. David Duys and Dr. Calvin Trent. You both stood as inspiration, sounding boards, and support to me as I worked through this process.

I also wish to thank my family for continuously providing assistance and support to me, particularly my parents, Elton and Mary Rushlau, who taught me the lessons I needed to complete this undertaking. My children, Kristina and Jessica, have been a source of joy to me always and have given up time with their father so that I may pursue my dream.

Acknowledgments—Continued

I dedicate this dissertation to my wife, Jennifer Rushlau. Without your persistence, support, and friendship, I would not have come this far. Jennifer, you are my inspiration.

Matthew G. Rushlau

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CHAPTER I

INTRODUCTION

Overview

Faculties in counseling psychology and counselor education training programs give much thought to the factors that lead to effective counseling skill development. Understanding how trainees acquire the skills necessary for adequate counseling performance is important to the design, implementation, and evaluation of training programs. Counseling faculties seek to understand which beliefs of counselor trainees are related to effective counseling performance and how training experiences affect these beliefs.

One of the beliefs of specific interest to counseling faculties is the trainee's belief of self-efficacy. Extensive research has demonstrated that self-efficacy is an essential cognitive variable in the acquisition of new skills and abilities (Bandura, 1986a, 1995; Kernis, 1995; Maddux & Stanley, 1986). Simply defined, self-efficacy is one's belief in one's ability to perform a certain task.

Researchers (Bandura, 1995; Maddux & Stanley, 1986) have demonstrated that practicing certain skills increases both the quality of performance of the particular skills and the person's level of self-efficacy related to those skills. Research has shown self-efficacy to be an important cognitive variable in affecting behavior. In fact, Albert Bandura (1977a) claimed that self-efficacy functions in all learning situations and mediates all behavior change. Bandura defined self-efficacy as "the

conviction that one can successfully execute desired behavior” (p. 195). Efficacy is thought to influence (a) whether a given task will be initiated, (b) how much effort will be expended on the task, and (c) how long a response will be sustained in the face of challenging obstacles (Bandura, 1986a). As a person’s beliefs of self-efficacy increase, initiation, effort, and perseverance are thought to increase. If a person persists and succeeds at a task that was once thought to be challenging, then self-efficacy beliefs increase. Therefore, successful performance increases self-efficacy beliefs, which in turn increases the likelihood of initiating practice behaviors conducive to future successes with this and other tasks.

Background of the Problem

Most master’s level training programs in counseling include a variety of classroom instruction experiences as well as opportunities to learn and practice counseling skills. Through instruction and practice it is believed that counseling skills can be learned and improved. Training program faculties intend the instruction and practice experiences they offer to help trainees increase their confidence in their abilities to demonstrate appropriate skills in counseling. Most counseling training programs provide a series of counseling practica beginning with a prepracticum skills training course with role-played clients, followed by a practicum in which trainees work with actual clients under supervision, and finishing with a supervised community placement in which trainees work in counseling service settings.

Bandura (1977a) stated that the most efficient way to increase self-efficacy was to accomplish difficult tasks. Research conducted since Bandura’s (1977a) initial work supports the idea that executing tasks is crucial in learning new skills (Maddux

& Stanley, 1986). These findings support the use of counseling practica and other skill-oriented courses in the development of counseling skills.

Much research about self-efficacy, particularly the earliest studies, attempted to demonstrate its mediating role in the outcome of psychological treatment (Kirsch, 1986). Research has subsequently demonstrated the role of self-efficacy in a variety of other educational and clinical settings (Sheldon, 1990). Recently, researchers have begun to examine the role of self-efficacy in counseling performance (Johnson, Baker, Kopala, Kiselica, & Thompson, 1989; Munson, Stadulis, & Munson, 1986; Munson, Zoerink, & Stadulis, 1986). The early work in self-efficacy focused mainly on microbehaviors that researchers could easily delineate and observe (Larson et al., 1992). Research has moved from these microbehaviors to more complicated patterns of behavior, like counselor effectiveness. Research that includes more variability and a greater time factor more clearly approximates counseling behaviors and has proven to be a rich area for research. However, complex counselor behavior patterns are more difficult to observe, describe, and study (Larson et al., 1992). Counselor behavior is more difficult to study because many variables affect counselors as they work with clients, including, for example, the client's response to the counselor, the counselor's feelings toward the client, and the nature of the client's problems. Delineating these counseling variables is a complex task. Self-efficacy may be just one of many variables that affect counselor performance. Despite the complexity of counseling work, it is important to attempt to understand what specific variables may be influencing counselor skill development.

The type of training typically offered master's level trainees is designed to improve counseling performance. However, trainees may graduate lacking confidence in their ability to perform proficiently as counselors and feeling anxious in the use of

skills in authentic counseling situations (Perlman, 1985). Trainees' beliefs in their abilities to perform certain skills, and their beliefs in the ability of that performance to produce positive outcomes for the client, are the basis of self-efficacy convictions (Bandura, 1977a). Recent research has suggested that counselor trainees' self-efficacy for counseling performance may be a predictor of actual performance of certain skills in counseling situations (Larson et al., 1992). The results of this research are inconclusive due to limited sample sizes; therefore, the investigators could not make statements of significance definitively linking self-efficacy with performance.

It is important to continue to examine what kinds of training actually increase trainees' self-confidence and effectiveness. Research identifying counselor variables predictive of effective counseling performance has met with limited success (Sharpley & Ridgway, 1993). Studies typically conclude with insignificant or inconclusive results, leaving counselor trainers to decide for themselves which variables they will develop and evaluate in their trainees (Sharpley & Ridgway, 1993). Research has further shown that trainees express apprehension regarding work with clients and fear that they cannot perform the necessary techniques (Deutsch, 1984). Self-efficacy theory states that practicing behaviors leads to an increase in beliefs in executing the desired behaviors necessary to accomplish a specific goal, and to decreases in anxiety surrounding the behavior. Practicum experiences offer an opportunity to practice skills in actual counseling situations, thus offering the chance to increase the level of trainee self-efficacy and to decrease the trainee's apprehension surrounding work with clients. The contribution of the current research is that it attempts to evaluate a variable that trainers can use to assess trainees' progress, which in turn may assist in the design of training programs.

This study examined a training program that offers a practicum within the training department where trainees practice counseling under the supervision of a qualified instructor. This practicum is completed prior to a final 600-hour field practicum. The practicum offers many trainees their first encounters with clients who request counseling services and are not role-playing. Because the investigator wished to examine the change in level of self-efficacy in counselor trainees as a result of exposure to realistic practice, it was important that the trainees were involved with actual clients, rather than individuals role-playing clients.

Statement of the Problem

Counseling faculty design training programs to teach skills and techniques and to increase the effectiveness of counselors. Typically, training is accomplished through classroom instruction and supervised practical experiences. This combination is similar to the techniques Bandura (1977a) refers to as performance enactment and verbal persuasion, which he maintains are important in increasing a person's sense of self-efficacy. In addition, it seems natural to consider self-efficacy an important variable in the learning of many complicated behaviors, including the acquisition of counseling skills.

There is research evidence that indicates that training programs may foster self-efficacy by allowing trainees opportunities to learn about, observe, and practice counseling situations through various practica (Sharpley & Ridgway, 1993). To date, small sample research that links performance in counseling situations with the counselor's sense of self-efficacy has been inconclusive. A few authors (Johnson et al., 1989; Larson et al., 1992) have suggested that self-efficacy may increase over a semester-long practicum. However, no research was found that definitively

established the relationship between self-efficacy and the improvement in counseling performance in a master's level practicum. Counseling is a complicated task and many variables may be affecting both competence in performing skills and self-efficacy. Although research has shown that both competence and self-efficacy increase during training, at least at some times, this does not establish the relationship between these variables. The problem addressed by this research is: What effect does practicum training have on counseling trainees' beliefs in their self-efficacy?

Importance of the Problem

Training programs intend to prepare counselors who are competent in their skills and confident in their ability to perform these skills. Training has been shown to be important in professional satisfaction among master's level counselors (Perlman, 1985). Many trainees graduate from master's training programs feeling inadequate in their abilities and are reluctant in their approach to clients. Perlman (1985) found that master's level counselors have indicated they were not confident in their abilities to perform counseling skills upon graduation. Research on job satisfaction among clinicians has demonstrated a pattern of greater distress about performing counseling skills among younger, less experienced counselors (Hellman, Morrison, & Abromowitz, 1987). Distress and lack of confidence could lead to inadequate service to clients, early burnout of counselors, and departure from the field. It is imperative that counseling faculty have a firm understanding of the effects their training is having on counseling trainees. Counseling faculty may be able to design training programs to maximize the competence of their trainees by focusing greater attention on the trainee's level of self-efficacy.

Definitions

The following definitions are provided to clarify the meaning and the use of certain terms in this study.

Self-Efficacy: For the purposes of this study, self-efficacy is defined as a person's belief in the ability to perform counseling behaviors that will lead to satisfactory service to clients.

Counseling Self-Efficacy: For the purposes of this study, counselor self-efficacy is defined by scores on the Counselor Self-Estimate Inventory (COSE); scores range from 37 to 222. The COSE is designed to assess self-efficacy in five areas related to counselor performance (Larson et al., 1992).

Practicum Group: For the purposes of this study, the practicum group was defined as trainees enrolled in a beginning counseling practicum for the 1998 spring/summer semester.

Comparison Group: For the purposes of this study, the comparison group was defined as master's trainees from the department enrolled in either group dynamics, research methods, or community agency counseling courses in the 1998 spring/summer semester and who were not enrolled in counseling practicum.

Research Questions

This study involved the collection and analysis of data designed to address the following research questions:

1. Is there a significant difference in the level of self-efficacy after a semester of training between trainees enrolled in a counseling practicum and those enrolled in other counseling courses?

2. Is there a significant difference between pre- and posttest measures of counseling self-efficacy during a semester-long master's level counseling practicum?

3. Is there a significant difference between pre- and posttest measures of counseling self-efficacy after basic counseling courses, such as community agency counseling, group dynamics, and research methods?

4. Is there a significant difference in the change in self-efficacy between trainees based on general demographic information about the trainees?

Hypotheses

With regard to the first research question, it was hypothesized that trainees enrolled in a master's level counseling practicum would show significantly different levels of self-efficacy as measured by the COSE (Larson et al., 1992) than trainees enrolled in basic counseling courses, because they received practical experiences. It was also hypothesized that there would be significant differences between the two groups at posttest on all five subscales of the COSE, including: (1) Micro-Skills, (2) Process, (3) Difficult Client Behaviors, (4) Cultural Competence, and (5) Values subscales.

With regard to the second research question, it was hypothesized that there would be a significant difference between pre- and posttest measures of counseling self-efficacy after a master's level counseling practicum.

With regard to the third research question, it was hypothesized that there would be no significant difference between pre- and posttest measures of counseling self-efficacy after a semester in basic nonpracticum counseling courses.

With regard to the fourth research question, it was hypothesized that no significant differences would be found in the change in self-efficacy between groups

of trainees based on general demographic information about the trainees, such as age, gender, years of counseling experience, and number of semester hours completed in the department. It was also hypothesized that the number of client contact hours and supervision contact hours would not affect the reported level of counseling self-efficacy for the practicum group.

Limitations of the Study

The construct of self-efficacy is comparable to other related social cognitive constructs, such as locus of control (Rotter, 1966) and learned helplessness (Abramson & Seligman, 1978; Maier & Seligman, 1976). The three constructs are related, and each can be helpful when examining a person's attitudes, thoughts, and behaviors. However, self-efficacy is not identical to these constructs and, for the purposes of this study, was considered distinctive. Learned helplessness can be defined as a perception that one is unable to initiate or improve certain behaviors, while self-efficacy pertains to a person's belief that he or she is able to execute desired behaviors. Locus of control is also related to self-efficacy but attempts to describe whether a person perceives control to be either internal or external. Self-efficacy is defined as internal. Still, it may be true that a person with an external locus of control would have a lower sense of self-efficacy. This study was concerned with a person's specific belief about the ability to perform a specific task, which is defined as self-efficacy.

The participants in this study were taken from different sections of a master's level counseling practicum. Because the sections are led by different supervisors, the trainees were exposed to various supervisory styles. This may have affected both the level of self-efficacy and the overall counseling performance demonstrated by the

trainees. Although various instructors may have affected the development of counselor trainees in different ways, this study did not specifically study the progress of trainees. Rather, the current research attempted to examine the change in level of counselor self-efficacy over the course of the practicum semester, whatever supervisory style they are exposed to.

Participants in this study were counselor trainees in the same master's degree program. Results and conclusions can generalize only to this specific program and to other similar programs. Also, the results do not generalize to programs with different emphases, to other universities, to other geographic locations, or to other levels of counselor experience.

Another limitation concerned a difference between the two groups. Because the study was conducted over the spring/summer, there was a difference in the length of the classes, with the practicum meeting for 15 weeks and the comparison classes meeting for 8 weeks. The spring/summer course hours are equivalent to courses offered during regular semesters and are considered equivalent by the Graduate College. However, the difference in the number of weeks between the practicum and the comparison groups may have had an impact on the results of the research.

Finally, previous coursework varied among the trainees. However, the practicum requires certain prerequisite classes prior to enrollment, thus ensuring at least a limited amount of similarity of training. Of particular interest for this study, the trainees enrolled in the counseling practicum must pass a basic counseling techniques course using role-played clients prior to the practicum. All trainees experience some practice during the techniques course. Therefore, it is possible that trainees varied in their level of counselor self-efficacy due to either previous coursework or the training they received at the time of the investigation.

Overview of Method

This study examined the change in counselor self-efficacy between two groups of master's level counseling trainees. The study assessed master's level trainees in a counseling practicum for their sense of self-efficacy surrounding counseling techniques at pre- and posttest of a semester-long counseling practicum. The trainees' scores on self-efficacy were compared to a group of trainees enrolled in other counseling courses. The purpose of the study is to measure the change in level of self-efficacy over the course of a practicum. Self-efficacy was assessed by using the COSE (Larson et al., 1992), which was administered at pre- and postsemester intervals. The participants also completed a demographic survey containing general information about themselves.

CHAPTER II

REVIEW OF LITERATURE

Overview

This chapter will attempt to illustrate how the construct of self-efficacy relates to performance of various tasks, including performance of counseling-related skills. The researcher will review research literature pertaining to self-efficacy, giving particular attention to the construct as it relates to counseling skills. Ultimately, it will be shown that self-efficacy functions in many areas. It will be suggested, based on this evidence, that self-efficacy as it relates to counselor training warrants further investigation.

Introduction

Bandura (1977a) suggested that individuals may develop self-efficacy in four ways: (1) successfully accomplishing difficult tasks; (2) obtaining vicarious experience (e.g., watching a model); (3) verbal persuasion; and (4) coping with emotional arousal. Bandura (1977a) stated that the most efficient way to increase self-efficacy was to accomplish difficult tasks. Research conducted since the original work supports the idea that the execution of tasks is crucial in the learning of new skills (Maddux & Stanley, 1986).

Much of the research about self-efficacy, particularly in the earliest studies, involved attempts to demonstrate its role in psychological treatment. For example,

Bandura (1977a), in an original investigation, worked with people suffering from a phobia toward snakes who had undergone desensitization training to help them overcome their fears. People who reported higher self-efficacy regarding snake handling after they received desensitization training subsequently approached and handled the snakes to a greater extent than those who measured lower in their self-efficacy regarding snake handling. Subsequent research has demonstrated the role of self-efficacy in a variety of educational and clinical settings (Kernis, 1995; Sheldon, 1990). This research will be discussed in more detail in the sections that follow.

Theory of Self-Efficacy

Self-efficacy began as a construct within Bandura's Social Learning Theory (Bandura, 1977b). Social Learning Theory is based on the assertion that behavior, personal factors, and the environment are interwoven determinants of each other. Social Learning Theory asserts that most learning happens on a vicarious basis by observing others, their behaviors, and the outcomes of their behaviors. Vicarious experiences enable people to learn complex integrated behaviors without having to practice and create them over extended periods of time. Bandura presented the idea that learning occurs through a feedback loop which is initiated by the observation of others. Trial and error then becomes a cognitive exercise rather than a physical one, and the result is a learned behavior. Response consequences provide information to the person that helps the person form suppositions about which behaviors are most appropriate for a given situation. An integral part of Social Learning Theory is the notion that a person affects the environment and is not just acted upon by circumstances. The individual is an active participant in the environment, and personal beliefs and behaviors actually change the overall situation. Bandura

postulates that self-efficacy is part of the cognitive process in Social Learning Theory in which individuals determine to what extent they believe they can perform the task they have vicariously experienced. A person must believe in ability to perform the required skills before the behavior will be initiated. Bandura (1977a) later described self-efficacy as occurring in virtually all learning experiences and developed the construct into a theory of cognitive variables important to learning.

Bandura (1977a) presented self-efficacy as an integrative theory to explain and predict the range of changes achieved by psychological treatment. Bandura (1986b) further theorized that psychological interventions of any kind affect one's sense of self-efficacy. During the last decade, research concerning self-efficacy broadened to explore a variety of complicated and motivated behaviors such as career decision making, clinical pathology, chemical dependence, and cognitive functioning (Bandura, 1995; Comunian, 1989; Lapan, Boggs, & Morrill, 1989; Sipps, Sugden, & Faiver, 1988).

According to Bandura (1977a), self-efficacy is a cognitive mediator with two distinct components: efficacy expectations and outcome expectations. Efficacy expectations are beliefs about one's ability to perform a particular behavior, while outcome expectations pertain to one's judgment that performing the specific behavior will produce a given outcome. Bandura differentiated these components because people may believe that a behavior will lead to a particular outcome (outcome expectation), but they may doubt their ability to perform the required behavior (efficacy expectation). To look at the relationship sequentially, efficacy expectations affect whether the person will attempt a behavior, while outcome expectations come into play after the person has decided to make an attempt, thus affecting the outcome of the behavior. Efficacy and outcome expectations are thought to affect whether one

attempts a task and how long a person will persist at a task after obstacles arise.

Therefore, they affect both the initiation and the persistence of coping behavior. How strongly people believe in their own effectiveness will likely affect whether they attempt new tasks or try to cope with difficult situations.

Bandura (1977a) proposed that efficacy expectations vary on three dimensions: (1) magnitude (degree of difficulty of the tasks a person feels capable of performing), (2) generality (whether the task instills a behavior-specific sense of efficacy or extends to a broader range of instances), and (3) strength (level of confidence in one's belief of performance). People must make assumptions in each of the three areas listed above for the particular behavior they undertake to succeed. Individuals' expectations may be task-specific, or they may extend to a variety of situations (generality). The expectations may be weak and easily extinguished, or they may be stronger and show perseverance (strength). Lastly, people may have varying beliefs about their ability to do difficult tasks (magnitude). Therefore, the efficacy expectation is not a simplistic notion that readily explains only a single variable. Rather, it is a complex construct that attempts to integrate multiple concepts into a usable theory (Kirsch, 1986).

Bandura (1977a) presented four major sources of information people use when forming efficacy estimates: (1) performance accomplishments, (2) vicarious experience, (3) verbal persuasion, and (4) emotional arousal. An individual's previous performance is especially influential, because it is based on a history of successes and failures. Repeated successes raise mastery expectations, while repeated failures lower them. The negative impact of occasional failures decreases after strong efficacy beliefs are formed through repeated successes. Furthermore, if a person succeeds after applying effort to something that once seemed insurmountable, efficacy

estimates will increase and maintain. The timing and pattern of the past failures and successes have relevance to the person's self-efficacy (Bandura, 1986c, 1993).

Although performance remains the primary source for acquiring data in Bandura's model, actual performance of behaviors is not the only source of information affecting a person's self-efficacy. Vicarious experience is also an influential source of efficacy information. Observing others performing well in difficult or threatening situations and achieving positive results may convince individuals that they can also succeed. In addition, the observer gains information about the likelihood of anticipated harmful or negative results. The similarity between the observer and the individual performing the activity also influences the efficacy expectation. If a person believes that an individual of similar ability can perform the behavior, he will have a greater strengthening of self-efficacy than if the other person appears more skilled. Bandura (1977a) related vicarious experience to modeling, and based on the research on modeling, he stated that it is a weaker source of influence on self-efficacy than actual performance. However, modeling is still considered a sufficiently influential approach to affect a person's level of self-efficacy and subsequent behavior.

Verbally persuading people to attempt difficult or anxiety-producing tasks may be the most common method of influence on self-efficacy and behavior because of its availability and ease (Saklofske, Michayluk, & Randhawa, 1988). When individuals have no experience on which to base their judgment, they must rely on the persuader's expertise and credibility. However, according to Bandura (1986a), verbal persuasion affects efficacy expectations the least. Verbal attempts at inspiring efficacy expectations regarding a certain task yield weaker results than if individuals gain information through their own accomplishments (Bandura & Cervone, 1983).

Furthermore, efficacy expectations derived verbally are weaker and more susceptible to extinguishing in the face of disconfirming experiences. Persuasion can be effective in convincing a person to attempt a novel task, but success or failure at the task actually affects future performance and persistence.

Some difficult or stressful situations elicit emotional arousal that may affect a person's feeling of competence (Stidwell, 1991). Bandura (1988) suggested that emotions arising in stressful situations provide physiological information about a person's belief of self-efficacy. Often fear and anxiety lead to negative results on a specific task (Bandura, 1988; Schwarzer, 1992). Therefore, the efficacy expectation associated with the tasks that produce negative emotions is adversely affected. A person might then avoid a task that produces negative emotions and not allow the opportunity for success in those tasks. By avoiding stressful and difficult situations, the person inhibits the natural development of coping skills, lowers a sense of competence, and provides an authentic basis for fear. Bandura (1989) further postulated that if the individual positively appraises arousal, it can lead to improved self-efficacy, more competence, and increased skill performance. The cognitive process of appraising a situation is interdependent with the emotional state associated with the event. The two pieces of information affect each other and help to establish efficacy expectations.

Bandura (1977a) described a difference between information gained from environmental stimuli and information that develops from the person processing and reconstructing the stimuli. The effect an event has on efficacy expectations will depend on how the individual cognitively appraises the information being observed and gathered from the situation. Many contextual factors, such as social and situational conditions under which the event occurs, affect how efficacy appraisals

develop. Successes are more likely to raise self-efficacy if the person believes the performance results from the individual's ability rather than from environmental circumstances. Cognitive assessment of the difficulty of the task provides additional information for use when making future efficacy judgments. Success at a more challenging task results in evidence of competence and enhanced efficacy expectations.

As mentioned above, Bandura (1977a) worked with individuals with snake phobias in his research on self-efficacy. To investigate the legitimacy of self-efficacy theory, Bandura (1977a) conducted an experiment in which people with snake phobias received treatments designed to modify their efficacy expectations and behavior. The researchers designed a study to examine the relative effectiveness of performance accomplishment and vicarious experience in influencing self-efficacy. To explore the two methods of modifying one's sense of self-efficacy, Bandura used three groups: the first group directly interacted with snakes, the second group watched models interact with snakes, and the third group received no treatment. Participants made estimates of their self-efficacy regarding snake approach tasks before and after treatment. The researchers also assessed actual snake approach behavior of the participants. Experiences based on performance accomplishments produced higher, more generalized, and stronger efficacy expectations than did vicarious experience. Further, vicarious experience was more effective at raising efficacy expectations than no experience. In addition, the study demonstrated that greater changes in perceived self-efficacy resulted in greater changes in behavior.

Another study was designed to demonstrate how performance accomplishment, vicarious experience, and extinction of arousal may influence self-efficacy. In this study, Bandura (1977a) used participant experiences, cognitive

modeling, and desensitization in treating people with snake phobia and agoraphobia. Each of the treatment groups showed increases in self-efficacy, behavior change, and decreased fear arousal. Furthermore, he demonstrated that self-ratings of self-efficacy predicted change in behavior more accurately than did emotional arousal or previous performance. Self-efficacy proved instrumental in learning to cope with fearful stimuli. As the theory has developed, many areas of research have demonstrated self-efficacy's predictive ability over a broad range of behaviors and emotions (Lennings, 1993; Maddux & Stanley, 1986).

Research Applications of Self-Efficacy Theory

Although the concept of self-efficacy was originally perceived to account for a single focused therapeutic change, self-efficacy theory is now considered useful in explaining a variety of motivated behaviors in and out of the realm of therapy (Longo, Lent, & Brown, 1992; Solberg, Good, Fisher, Brown, & Nord, 1995). Anxiety, depression, substance abuse, career decision and academic persistence, motivation, coping behavior, decision making, and counseling skills are all areas that researchers have conceptualized as affected by self-efficacy. The remainder of this chapter presents a review of the research relating self-efficacy to several of these areas, highlighting an examination of self-efficacy as it relates to the development of helping skills.

Anxiety

Bandura's (1977a) original research on self-efficacy dealt with its relationship to anxiety, specifically phobia of snakes. Since then, the role of self-efficacy in anxiety reactions has been further explored. Bandura, Reese, and Adams (1982)

conducted three experiments involving people who had spider or snake phobias. The experimenters attempted to induce low, medium, or high self-efficacy levels in the participants through either active mastery treatments (where participants performed feared tasks), or modeling treatments (where participants watched others perform feared tasks). The study used pre- and postmeasurements of coping behavior, autonomic arousal, and self-reported fear arousal as dependent measures. The researchers found that regardless of which treatment the participants received, their self-efficacy was elevated, they experienced less distress, and they engaged in increased coping behavior. Following the increase in self-efficacy, participants who had experienced elevated heart rate and blood pressure in anticipation of and during the approach tasks managed the tasks with no visceral effects. Enhanced efficacy expectations were associated with greater approach behavior and less autonomic arousal for people with snake or spider phobias. Therefore, the authors suggested that higher self-efficacy is associated with increased coping behavior and decreased autonomic arousal.

Williams (1992) examined many previously gathered data sets that contained measures of efficacy beliefs, anticipated anxiety, and phobic behavior. He computed correlations on the data sets and found a significant amount of the variance in phobic behavior could be accounted for by efficacy beliefs when anxiety was controlled for. In contrast, when efficacy beliefs were controlled for, anticipatory anxiety did not predict variance in phobic behaviors. These findings seem to indicate that people who constrict their lives due to phobias are not just acting to prevent anxiety, panic, or possible catastrophic outcomes, but they have a low sense of self-efficacy concerning their ability to handle certain situations. The author's conclusion was that it could be a person's lack of efficacy, rather than anxiety or panic, that leads to catastrophic

expectations. Therefore, the indication may be that counseling should be directed at increasing a person's sense of efficacy for a given situation, rather than trying to correct irrational expectations.

Because of the prevalence of anxiety reactions, counselors need to develop the ability to deal with their own stress and anxiety brought on by situations that may arise in the counseling relationship. Familiarity with self-efficacy research pertaining to fear and avoidance behavior is therefore pertinent for counselors (Deutsch, 1984). Furthermore, research conducted by Medeiros and Prochaska (1988) revealed that counselors who developed an effective strategy for coping with anxiety believed that they could deal well with client-generated stress. This research seems to indicate that effective counselors need to learn how to cope with fear, anxiety, and other difficult emotions.

Depression

Depression of varying intensities is a common difficulty and is a rather normal part of life. Feelings of hopelessness and lack of energy affect all people at one time or another. Most people experience occasional periods of feeling down, but these times pass and the person returns to a more regular level of functioning. At times, however, a person's sense of dread and emptiness can become longstanding and debilitating. Clinical depression may result from difficulties in any of the three major determinant areas described by Bandura (1977a) in his Social Learning Theory: (1) personal factors, (2) behavior, and (3) external factors. Personal factors, including cognitions, affect, and subconscious processes, can lead a person to depression through irrational thoughts and feelings or internal conflicts which may or may not be in the person's awareness. Behavior that leads to failure or perceived poor

performance can lead to frustration and dysphoric moods. External factors that may be beyond a person's control, such as loss of relationship or loss of career, can also lead to depression.

Self-efficacy interacts with all three major determinant areas that may lead to depression. In fact, beliefs of inefficacy can lead to difficulties with any one of the areas, and since the three areas affect one another, problems with one area will impact on the other two. For example, Bandura and Jourden (1991) wrote that perceived outperformance by others in activities important to an individual led to self-disparaging cognitions and emotions. In this example, a behavior judged by the person as "falling short" affected the individual's internal functioning and led to dysphoric emotions. Efficacy operates in this example at the point where the people became despondent after judging themselves to have less ability in a valued area. Correspondingly, as they began to have an increased sense of self-efficacy, they will begin to feel more in control, and their mood will begin to brighten.

Social support operates positively in the relief of depression. People need to develop relationships with others that will give them the needed support and strength to help sustain them in difficult times and elevate their mood. However, many people feel a low sense of social efficacy and do not feel competent to enlist the help or friendship of others. Cantor and Harlow (1994) note that people with a high sense of social efficacy are more able to build a supportive network and maintain it than those with a low sense of social efficacy. During difficult times, the network of relationships a person has developed can help the person persist in daily activities and maintain a nondepressed mood.

Motivation

Researchers have completed studies concerning individuals' levels of motivation in a variety of situations (Longo et al., 1992). Bandura and Cervone (1983) found evidence that perceptions of self-efficacy can affect motivation. The researchers gave the participants feedback regarding their performance on a physically demanding bicycling task. Participants who were told that their performance had been strong reported higher self-efficacy for the task and persisted more at the task than those given a poor report of performance. Further, participants having stronger self-efficacy beliefs concerning their ability to meet challenging standards increased the intensity of their efforts more than their counterparts with weaker efficacy beliefs.

Locke, Frederick, Lee, and Bobko (1984) studied the effect of self-efficacy on goal choice, motivation, and task performance by having participants execute a cognitive task. The investigators asked the participants to generate lists of uses of common objects. They found that ability, past performance, and self-efficacy were the major predictors of how difficult a goal the participants chose to engage in. Ability, goals, strategy, and self-efficacy all related to successful performance of the task. Self-efficacy proved a predictor of future performance, particularly for participants choosing moderate or difficult goals. The study demonstrated the relevance of self-efficacy to the performance of a cognitive task and its role in maintaining motivation during particularly challenging tasks.

Wood and Bandura (1989) explored the impact of conceptions of ability on both self-efficacy and complex decision making. The researchers persuaded participants to believe that ability is either a fixed entity or an incremental skill that

they could modify. They required participants to act as managers and match employees to various functions in a hypothetical organizational environment. The participants were then asked to employ certain managerial rules to achieve a difficult level of organizational performance. Participants under the fixed entity view of ability lowered their self-efficacy, lessened their organizational goals, and overall became less efficient in performing skills. Participants in the more acquirable skill condition demonstrated sustained levels of self-efficacy, established challenging goals for the organization, and used analytic decision making strategies more effectively. This study seems to indicate that the belief that ability can be improved results in more difficult goals attempted and improved performance in a complicated decision-making situation. This finding supports a fundamental idea in the theory of self-efficacy, that people can learn complicated ideas and achieve challenging results, and that performance level is not a fixed entity. More important, this research suggests that much of what is needed to accomplish difficult goals is a product of one's level of confidence in one's abilities (Bouffard-Bouchard, 1990).

Drug and Alcohol Abuse

Abuse of drugs and alcohol is quite prevalent and causes many problems for abusers, those close to them, and to the greater society. Understanding the development of substance abuse problems is necessary to establish effective treatments. People develop alcohol and drug problems in many different ways and the problems manifest with much variety. A person could have problems with drinking from the first taste of alcohol as a teenager, or may start as a social drinker and slowly develop a problem over many years. Because of the multitude of manifestations of alcohol problems, it seems that there would be several

conceptualizations of the problems and many effective treatments. However, since Jellinek (1960) described alcoholism as a medical problem, the “disease” concept has been quite prominent. Some helping professionals conceptualize alcoholism as a disease that renders a person unable to control his drinking behavior. They also understand alcoholism to be irreversible, causing a person continually to have to strive to remain in recovery. This model does not fit well with the theory of self-efficacy, which places much more emphasis on the ability to gain control of many aspects of life through the learning of new behaviors and the changing of personal beliefs of competence.

Young, Oei, and Crook (1991) investigated the relationship between self-efficacy and amount of alcohol consumed. They found that a low sense of self-efficacy to manage drinking in certain situations led to greater alcohol consumption in young drinkers. This was true even if the individuals said they did not want to drink. The researchers hypothesized that social pressure in certain situations contributed to whether or not a young person would drink. They also found that beliefs of self-efficacy could separate problem drinkers from light drinkers. Alcohol dependence typically develops over a long period of regular use. Therefore, it is important to note that the findings of this article suggest that people can control their drinking before physical dependence. Because many people begin problem drinking out of social pressure, it would make sense that a high sense of social efficacy to withstand such pressure would be helpful in remaining a moderate drinker.

In the treatment of alcohol abuse, it would make sense to attempt to increase a person’s sense of self-efficacy to resist social pressure. The main goal of most treatments for addictions is to prevent future relapses. Annis and Davis (1989) described a study where people ranked situations in which they had difficulty resisting

pressures and urges to drink. After they developed the list, the participants created their own strategies for dealing with these situations and then practiced the plans in progressively more stressful contexts. As the people gained mastery experiences over increasingly risky behavior, their sense of self-efficacy to resist pressure to drink increased. It seems that training in ways to increase individuals' belief in their ability to resist pressure to drink would be an important part of the treatment of alcohol abuse.

Career Decision and Academic Persistence

A review of literature conducted by Lent and Hackett (1987) concluded that individual perceptions of career options related to self-efficacy. Further, the authors determined that eventual career choice also related to self-efficacy. People tend to explore options in fields where they feel some amount of self-efficacy and rule out professions where they lack a sense of self-efficacy. In addition, they found that people tend to explore more options within a given field depending on their general sense of self-efficacy in that field. Hackett (1985) reported that individuals with a low sense of self-efficacy concerning mathematical skills were more likely to avoid math classes and fields that rely heavily on math. This is potentially detrimental to a person's career choice and satisfaction because it limits optional fields of study perceived as requiring quantitative abilities, such as scientific, technical, and some business fields.

Lent, Brown, and Larkin (1986) examined the effects of undergraduate students' perceptions of four variables: (1) global self-esteem, (2) career indecision, (3) vocational interests, and (4) self-efficacy, on three areas (1) academic grades, (2) perseverance, and (3) perceived career options. The researchers found that self-

efficacy accounted for significant variance in the three areas of interest. In addition, they found that self-efficacy was the most predictive variable examined. The authors concluded that a sense of self-efficacy affects academic grades, perseverance, and perceived career options more than do self-esteem, career indecision, or vocational interests. This finding is surprising, given that a major focus of career counseling has been to identify areas of vocational interest and then locate careers that match with those areas. The authors discovered that it may be equally important to assess a person's feeling of self-efficacy toward a certain career or vocation when providing career counseling. In this way, people with a high degree of self-efficacy for a given profession may be more likely to choose that career, attain higher grades, and persevere in their studies.

Gender disparities exist in career choice, and these disparities have been examined in terms of gender differences in occupation-specific self-efficacy (Betz & Hackett, 1981; Hackett, Betz, Casas, & Rocha-Singh, 1992). While women represent approximately half of the total workforce in the United States, the percentage of women in professional fields traditionally dominated by men is quite low. Women tend to view themselves as less efficacious in traditionally male occupations, and therefore are less likely to choose these occupations (Hackett et al., 1992). On the other hand, men tend to have an equally high sense of self-efficacy for traditionally female careers as they do for traditionally male careers. This disparity in self-efficacy beliefs limits women's opportunities in stereotypic ways. The limitation has less to do with vocational interest and actual ability than with perceived inefficacy.

Development of Counseling Skills

Initially, research regarding self-efficacy focused mainly on simple behaviors that one could easily trace and observe (Larson et al., 1992). The sections described previously in this review of literature demonstrate a progression from the earliest research in self-efficacy into a wide variety of fields and research areas. Moving from these microbehaviors to more complicated patterns of behavior that involve much more variability and more time has been a rich area for research. One complex set of behaviors will be the focus of the current research. Counselor behavior patterns are more difficult to observe, describe, and study than other behaviors (Larson et al., 1992). This is because many variables affect counselors as they work with clients, and defining these variables is a complex task. Self-efficacy may be one of the many variables that affect counselor performance.

Research conducted on self-efficacy and counselor performance has focused exclusively on counselor trainees. The research has shown that trainees express apprehension regarding work with clients and fear that they cannot perform the necessary techniques (Deutsch, 1984). Much of the research already described suggests that feeling anxious and unsure about performing a certain behavior may lead to poor execution of the required skills. Self-efficacy theory states that practicing behaviors leads to an increase in one's belief that one can execute the desired behaviors necessary to accomplish a specific goal. Many counselor trainees initially practice skills in prepracticum and practicum courses before working with actual clients presenting for assistance.

Training Therapeutic Recreation Students

Munson and his colleagues published two articles in 1986 concerning self-efficacy and the training of therapeutic recreation students. The first article addressed the use of interpersonal skills by therapeutic recreation students (Munson, Zoerink, et al., 1986). The researchers' stated purpose was to assess which type of training would be most effective in teaching interpersonal skills: micro-skills training or mental practice. To assess the effectiveness of each type of training, the researchers used measures of competence and measures of self-efficacy at pre- and posttest intervals. They found significant differences for both types of training on both competence and self-efficacy between the pre- and posttests. This seems to indicate that both methods of training provide some level of effectiveness. The micro-skills method produced higher levels of competence than the mental practice method. This finding coincides with Bandura's (1977a) earlier research that suggests that performance accomplishments are more effective than other methods of learning. The researchers concluded that self-efficacy is a useful construct in research concerning the teaching of interpersonal skills.

In a follow-up study, the researchers examined the relationships among self-efficacy, competence, and "decision-making counseling" with therapeutic recreation students (Munson, Stadulis, et al., 1986). Again, they compared micro-skills training with mental practice, but for this study they examined decision-making counseling rather than interpersonal skills. The researchers found that both self-efficacy beliefs and competence increased during training, but in this study there was no difference between the two methods of training. The authors note that this finding raises some questions about earlier findings that micro-skills training was more effective than

mental practice. Based on research in self-efficacy, it would be expected that the performance of behavior would produce greater increases in self-efficacy than mental practice. The authors suggested that more research needs to be conducted to fully understand the utility of self-efficacy as a construct in assessing competence or predicting future performance.

Training Counseling Students

Johnson et al. (1989) hypothesized that counseling trainees' efficacy and outcome expectations tend to increase with level of training. Researchers grouped trainees by year in graduate school, and each participant viewed a videotaped client and wrote a response to the client's statements. Next, the trainees estimated the likelihood that they could make each response and the likelihood that making the response would lead to a desired outcome. The trainees rated their ability to make the response (efficacy) higher than their belief that the response would produce a positive effect (outcome), suggesting that trainees are less confident that responses produce favorable outcomes for clients than they are that they could make the responses. The results indicated that first-year trainees had higher self-efficacy than second-year trainees did regarding performing counseling skills. Further, third- and fourth-year trainees had slightly higher levels of perceived self-efficacy than first-year trainees did. The differences between groups were not significant, so drawing conclusions from the results should be done with caution. Self-efficacy theory suggests that as a person performs a behavior, his or her level of self-efficacy will increase. This study did not verify earlier findings supporting the theory, as second-year trainees actually scored lower than first-year trainees. In addition, the researchers did not find significant gains in self-efficacy at any level, perhaps suggesting that it may not play

as important a role in counseling skill development as in other situations, or that other variables are intervening in the development of counseling skills.

Friedlander, Keller, Peca-Baker, and Olk (1986) studied the effect of role conflict on counselor trainees' self-statements, anxiety level, performance, and self-efficacy. The authors defined role conflict as finding out that a supervisor disagreed with the trainee's evaluation of a counseling situation. Role conflict did not appear to influence trainees' behavior, anxiety, self-evaluations, or self-efficacy. As an additional analysis, the researchers discovered that performance inversely related to the trainees' level of anxiety. Further, the researchers suggested that anxiety was inversely related to self-efficacy, verifying Bandura's (1977a) notion that emotional arousal could negatively affect self-efficacy and performance. The authors did not examine the relationship between counselor performance and self-efficacy, but they drew conclusions that the two concepts were related based on their results coupled with previous research on self-efficacy.

In her dissertation, Ellington (1993) examined the influence of supervision on counselor performance, anxiety, and self-efficacy using a sample of master's level trainees in a semester-long practicum. Her hypotheses predicted how each of the three variables would affect supervision. She also considered the relationships between anxiety, self-efficacy, and counselor performance, and how each variable changed during the practicum. The trainees reported a decreased level of anxiety and displayed improved performance. The results indicated no difference in the level of self-efficacy for counselor trainees on a posttest measure after the trainees had completed the practicum. These findings seem to indicate that improved performance was not related to increased beliefs of self-efficacy. The generalizability of these results is somewhat questionable because of the limited size of the sample ($N = 21$);

however, the findings do not support earlier research that seemed to indicate that efficacy would increase with practical experience and performance accomplishments.

Sharpley and Ridgway (1993) examined the effectiveness of self-efficacy as a predictor of trainees' counseling skills performance. The researchers evaluated trainees enrolled in a master's level practicum. The authors measured the trainees at the beginning, middle, and end of the practicum for both level of self-efficacy for performing counseling skills and actual performance. They assessed performance through supervisory evaluations and self-efficacy through a measure designed specifically for this study. The self-efficacy measure was a self-report instrument based on anticipated grades for the practicum; the authors described it as measuring the level of confidence and self-efficacy. The results suggested that there were wide variances in both self-efficacy and performance within the group of trainees. Neither of the estimates of self-efficacy were significantly associated with counseling skills. The authors suggest that self-efficacy's usefulness as a predictor of future performance is called into question by the results. They suggest further that although no relationship appeared in their research, future research is needed to understand the relationship between these two variables.

Development of the Counselor Self-Estimate Inventory

Larson et al. (1992) published a description of the Counselor Self-Estimate Inventory (COSE), which attempts to measure a counselor's self-efficacy estimations. Much of the article is devoted to describing the development of the instrument from basic construction through factor analysis. The authors also discuss studies of reliability and validity, and they report both as quite strong. From this initial work, it

appears that the COSE may be quite useful in future studies of self-efficacy and counselor performance.

As part of their initial work on the COSE, Larson et al. (1992) studied the instrument's usefulness in a master's practicum. The researchers compared the trainees' beliefs of self-efficacy as measured by the COSE to their performance in the practicum as measured by supervisor's appraisal. The authors wanted to assess whether the COSE could be useful in measuring change over time. Findings suggested that the trainees did improve in both beliefs of self-efficacy and performance of counseling skills. It appears that the COSE was useful in this case and that self-efficacy related directly to performance of counseling skills. However, the study used a small sample size of only 10 trainees, with 7 females and 3 males. The authors made no statements of significance due to the small sample, and any conclusions need to be used cautiously. The authors did suggest that future research considering the relationship between self-efficacy and counselor performance is needed and could help in the development of effective training programs.

In another study, Larson et al. (1992) showed that counselor self-efficacy increased over the course of a semester for master's trainees in two sequential practica. However, again their samples were small ($N = 4$, and $N = 6$), so the investigators could not make statements of significance concerning the increase in the trainees' self-efficacy. Although the authors did not find results that were statistically significant, their study provided some evidence that self-efficacy relates to the learning and performance of counseling skills.

More researchers have begun to examine the role of self-efficacy in the performance of counseling skills, particularly by trainees (Johnson et al., 1989; Larson et al., 1992; Munson, Stadulis, et al., 1986). Various researchers have

suggested that counselor trainees' beliefs of self-efficacy for executing counseling skills may be a predictor of performance of certain skills in counseling situations (Larson et al., 1992). Although early research on self-efficacy examined more simplistic and discrete behaviors, rather than complex sets of skills in varying situations, there remains a question about how a trainee's self-efficacy beliefs may influence his or her performance of counseling skills. Counseling is a complicated task, and many variables may be affecting both performance of skills and self-efficacy beliefs. Nevertheless, some studies have illustrated that self-efficacy increases over prepracticum skills course and a semester-long practicum.

In summary, the research about self-efficacy and counselor development seems to suggest that there is some relationship between efficacy and counselor performance. There is limited evidence that self-efficacy increases with level of training, suggesting that performance accomplishments in learning counseling skills may affect self-efficacy. Research also seems to indicate that counseling trainees who report higher levels of self-efficacy also appear to have lower anxiety.

Conclusion

Understanding the way people perceive their ability to operate in a given situation clearly has a dramatic effect on the outcome of their attempts. Consideration of how counseling trainees perceive their own ability to perform the skills necessary to perform effectively is essential in their training. The concept of how people view their ability in a given learning situation has been operationalized as self-efficacy. Beliefs of inadequacy or low self-efficacy may lead to increased anxiety and may decrease the ability of the trainee to learn the complex ambiguous skills required in counseling. There is apparently some connection between a trainee's belief of self-

efficacy and performance of counseling skills. Further, it seems that feelings of self-efficacy and confidence are required for future job satisfaction and effective job performance. Most counseling training facilities provide experiences that are designed to optimize the person's chances to succeed and learn counseling skills (Efstation, Patton, & Kardash, 1990). It would seem that the practicum experiences offered in most training programs would provide trainees the ideal setting for confronting anxieties while practicing skills. Counseling faculty may need to consider the impact their training is having on their trainees' level of self-efficacy regarding counseling skills.

From this review of literature it appears that the effect involvement in counseling practica has on self-efficacy is not fully understood. The research is inconclusive and mixed when describing the importance of self-efficacy in counselor training. Research considering how training bears upon the trainees' sense of self-efficacy seems important.

CHAPTER III

DESIGN

Introduction

This chapter includes descriptions of the participants, research setting, instruments, research design, and statistical analysis used in this study. The design utilized in this study was a nonequivalent groups design that compared changes at pre- and posttesting between two nonequivalent, nonrandomized groups. The information yielded by this study was a comparison of change over time between two groups. The sample consisted of trainees enrolled in a master's level counseling practicum and trainees enrolled in basic counseling courses.

Population and Sample

For the purposes of this study, the researcher defined the population as master's level trainees in the Counselor Education and Counseling Psychology (CECP) Department at a large Midwestern university. The sample for the practicum group consisted of all trainees enrolled in the counseling practica in the CECP Department in spring/summer 1998. The practicum consisted of five sections of 7 students in each section. A comparison group included trainees enrolled in basic counseling courses—community counseling, research methods, and group dynamics—in the spring/summer of 1998. The two groups were enrolled in classes concurrently.

The researcher invited all trainees enrolled in a practicum or one of the basic counseling courses to participate in the study. The number of students enrolled in the practicum sections was 35, and all of them agreed to participate in the study. Five of the participants were not present during the posttest administration of the COSE, leaving 30 students in the practicum group. In the basic counseling courses, 40 students agreed to participate in the study, which is about 90% of the total number for the classes. At posttest, 4 of the students were not present, and 5 students were eliminated from the comparison group because they had previously taken CECP 612, leaving 31 participants. To avoid analytical problems related to repeated measurements, trainees were allowed to participate in this study only once.

The researcher submitted the proposed plan for this study to the Human Subjects Institutional Review Board (HSIRB) at Western Michigan University for approval after approval had been received from the researcher's doctoral advisory committee. The HSIRB letter of approval is included in Appendix A.

Doctoral-level professional counselors or psychologists taught the practicum courses. Some of the supervision in a few sections is conducted by advanced doctoral trainees as part of an advanced course in clinical supervision. Instruction and material covered in each section of the practicum course varied depending on the particular supervisor, but each supervisor works from a common syllabus. Each section of the course experienced a different approach that may have affected self-efficacy and counselor performance.

Finally, the students were asked on the general questions form (Appendix B) to describe any difficulties they may have faced during the semester that they felt may have affected their performance in class. Only two students chose to respond to this question. One reported relationship difficulties they had during the semester, and the

other made a vague reference to a personal problem but then offered no details of this problem.

Setting

The research was conducted in the department's counselor training facility, the Center for Counseling and Psychological Services (hereafter referred to as "the center"). The center is equipped with a laboratory containing audio/video equipment, seminar, group and individual counseling rooms, and observation galleries for supervisors and peers. Counselor trainees in the department are enrolled in practicum courses and work with clients from the community and the university. Clients from the community are mostly self-referred to the center, while university students are usually referred from the University Counseling Center when there is an overload of requests for services. The clients seek help for a variety of personal concerns, from emotional and behavioral problems, to chemical dependence and vocational concerns.

The center is housed at a large Midwestern university. The university provides educational opportunities for more than 26,000 students. Enrollment for the 1997–1998 academic year includes approximately 20,000 undergraduate and 7,000 graduate students. Approximately 83% of the total student body report their race as Caucasian, 10% report minority status, and 7% report international status. Within the academic department used for this research, a majority of the students are female and identify themselves as Caucasian.

Instrumentation

Introduction and Demographic Survey

Trainees participating in the study completed the Counselor Self-Estimate Inventory (COSE) (Larson et al., 1992) as a pre- and posttest. In addition, the trainees completed a demographic survey at pretest and general questions at posttest, both designed by the researcher. The demographic survey asks for the following information: age, gender, number of completed semester hours in the program, supervised counseling experience, and whether the trainees have completed a counseling practicum prior to the current semester. A copy of the demographic survey can be found in Appendix C.

The posttest general questions survey asked the practicum participants to indicate the number of client contact hours they had conducted and the number of supervision contacts they had received during the practicum. Also, the participants were asked to describe any events in their lives that occurred during the course of the practicum they felt affected their development as counselors. The general questions survey can be found in Appendix B.

Counselor Self Estimate Inventory (COSE)

The COSE, developed by Larson et al. (1992) for use with counselors, was used as a measure of self-efficacy beliefs specifically related to counseling skills. Counselors in training indicate their level of confidence in their ability to perform as counselors by responding to 37 items. Items assess five separate counseling areas: (1) Micro-Skills, (2) Process, (3) Difficult Client Behaviors, (4) Cultural Competence, and (5) Awareness of Values. Trainees evaluate their abilities on a

6-point Likert scale ranging from “strongly agree” to “strongly disagree.” Larson et al. reported a Cronbach alpha of .93 for the overall test. The COSE was compared with other measures of personality to determine convergent validity and divergent validity of the separate scales. According to the researchers, satisfactory validity was found (Larson et al., 1992).

After factor analysis, the five counseling areas were delineated (Larson et al., 1992). The Micro-Skills subscale is related to the performance of basic counseling techniques of the type most likely taught in a beginning counseling skills course. The Process subscale includes more in-depth variables of the counseling process, including interactions between the client and counselor, as well as more complex interventions. The Difficult Client Behaviors subscale includes areas such as client resistance, suicidal ideation, and lack of motivation for counseling. The Cultural Competence subscale refers to working with clients from diverse cultural backgrounds. The Awareness of Values subscale addresses the counselors’ values and biases.

Larson et al. (1992) computed an estimate of internal consistency for each of the five factors using Cronbach alphas. The internal consistency for the five factors of the COSE were as follows: (1) Micro-Skills, $\alpha = .88$; (2) Process, $\alpha = .87$; (3) Difficult Client Behaviors, $\alpha = .80$; (4) Cultural Competence, $\alpha = .78$; and (5) Awareness of Values, $\alpha = .62$.

The complete COSE and the five COSE subscale factor scores displayed acceptable test-retest reliability with a 3-week interval between measurements (Larson et al., 1992). The test-retest reliability is as follows: (a) COSE total, $r = .87$; (b) Micro-Skills, $r = .68$; (c) Process, $r = .74$; (d) Difficult Client Behaviors, $r = .80$; (e) Cultural Competence, $r = .71$; and (f) Awareness of Values, $r = .83$.

The researcher sought permission to use the COSE in this research, and the developer of the instrument granted this permission. The developer stated that she does not want the complete COSE or items from the instrument to appear in published works such as dissertations. A copy of the letter of permission appears in Appendix D. Other researchers may obtain a copy of the COSE for review by contacting the developer at the address listed in Appendix D.

Method

Preparation

The researcher met with the director of the center to request permission to use the facility in conducting this research. As a result of the meeting, the director of the center agreed to allow the center be used for this project pending approval of the researcher's doctoral committee and the Human Subjects Institutional Review Board. The researcher attended a meeting of the five practicum supervisors held prior to the start of the semester to describe the nature of his research and to received consent from each supervisor to conduct research in his or her practicum. The chair of the academic department gave his consent to collect data during spring/summer 1998 courses. Faculty teaching courses to be used as comparisons were also contacted and permission to collect data in their courses was received.

After approval of the proposed research by the researcher's doctoral committee, all instrumentation and the research protocol was submitted to the Human Subjects Institutional Review Board, along with the necessary request for approval form for permission to conduct research at the university.

Data Collection

At the beginning and end of the 1998 spring/summer semester, the five practicum sections and the courses to be used as comparisons were surveyed. Through arrangements with instructors, the pretest measure of self-efficacy and the demographic survey were gathered during the first full week of the semester, and the posttest measure with the general questions were administered on the date the department course evaluations were scheduled to be conducted, which was the week prior to final examination week.

In each class or practicum, the researcher read the recruitment script (Appendix E) to the group of potential participants. The script requested that trainees participate in the research by agreeing to complete the pre- and posttest instrument as well as the demographic survey at pretest. (Please see Appendix C for a copy of the demographic survey.) Potential participants also received a copy of an informed consent form to read. The potential participants were informed that by returning the informed consent form to the researcher, they were indicating their consent to participate in the research. (Please see Appendix F for a copy of the informed consent form.) The potential participants were informed that participation in the study was completely voluntary and that their responses would remain anonymous. The researcher was available to answer any questions.

The informed consent form, demographic survey, and COSE were attached together and presented to each participant in the order listed above during the initial class or practicum session. The participant's name did not appear on the demographic survey or the self-efficacy measure. Instead, the participants formed a personal identification number consisting of their zip code plus the last four digits of their

social security number. The personal identification number was unknown to the researcher ensuring anonymity, and the participants were able to recall it at both pre- and posttesting so that responses could be matched for data analysis. The participants completed the self-efficacy measure again during the class period designated by the academic department for end-of-semester course evaluations. Access to participants' data was strictly limited to the researcher's use for analyses as described for this study. The data were stored in a locked file cabinet on campus with access limited to the principal investigator, and all data will be destroyed upon completion of this project.

All trainees enrolled in counseling practicum for the spring/summer semester of 1998 were invited to participate in the research and are designated as the practicum group. Trainees enrolled in Group Counseling, Counseling Theories, and Research Methods courses during the spring/summer session were invited to participate and constitute the comparison group. Trainees enrolled in both the practicum and a separate course being surveyed at the same time were asked to complete the survey only during their practica and are considered part of the practicum group. Courses were surveyed for the comparison group until at least 35 participants were surveyed.

Data Analysis

Three general types of analysis allow the researcher to address the five research questions. One group of analyses involved an analysis of covariance (ANCOVA). The second set of analyses involved an analysis of variance (ANOVA). Independent sample *t* tests were used as the third type of analysis. The three analyses were used to examine different hypotheses.

To test the first hypothesis, that there would be no significant difference in level of self-efficacy between the practicum and the comparison groups at posttest, six ANCOVAs on the posttest scores were completed. The COSE was administered at pre- and posttest, and the resulting scores were used in the ANCOVA analysis. The covariates used in the following analyses were the age of the participants, number of semester hours completed in the CECF Department, the number of years of counseling experience, and the pretest total scores on the COSE. The first analysis examined the total score of the COSE. The second analysis investigated differences between the groups on the Micro-Skills subscale of the COSE. Another analysis was conducted on the Counseling Process subscale of the COSE. The next analysis investigated the Difficult Client Behaviors subscale of the COSE. The fifth analysis examined differences between the two groups on the Cultural Competence subscale of the COSE. Finally, the sixth analysis was conducted on the Values subscale of the COSE.

The ANCOVA attempts to make some correction for the two groups being nonequivalent and nonrandomized (Huitema, 1980). The analysis adjusts the means of the groups being tested to be equal on the particular covariate measure at the pretest trial. The adjusted means are then used when performing the comparison of the posttest scores. Adjusted means and actual means can be expected to be quite similar in a randomized experiment, but the current research was a nonrandomized group design and attempts to control for between group variation. In the current research, the number of years of supervised counseling experience, the number of courses completed in the counseling program, and the score on the COSE at pretest could be intervening variables when assessing counselor self-efficacy. Once the covariate had been established and the means were adjusted, the analysis was quite

similar to an ANOVA, and the result was an F ratio that was compared to a critical value F to determine significance. To ensure an overall experiment error rate of $p = 0.05$, the level of significance for an individual analysis was set at $p = 0.008$ using the Bonferroni approach.

An important assumption in the correct usage of the ANCOVA analysis is that the population regression slopes associated with the practicum populations are equal (Huitema, 1980). If the slopes are heterogeneous, the treatment effects are different at different levels of the covariate, and the adjusted means can be unclear because they do not reflect this vital information but only describe the means. When the regression slopes are homogeneous, the adjusted means are adequate descriptive measures because the treatment effects are the same at various levels of the covariate. For this reason, the homogeneity of regression slopes test was carried out. The homogeneity of regression slopes test can be computed through the general linear regression model as an extension of the ANCOVA (Huitema, 1980). This procedure was utilized as required to interpret significant results.

To test the second null hypothesis, that there would be no significant difference in self-efficacy on pre- and posttest measures in the practicum group, a two-tailed t test for independent samples was used. The dependent variable was the level of self-efficacy, and the independent variable was time of the measurement, that is, either pre- or posttest.

To test the third null hypothesis, that there would be no significant difference in self-efficacy on pre- and posttest measures in the comparison group, another two-tailed t test for independent samples was used. Again, the dependent variable was the level of self-efficacy, and the independent variable was the time of measurement.

To test the fourth null hypothesis, that there is no significant difference in scores on the COSE between groups based on general demographic data, either independent samples *t* tests or ANOVAs were conducted. The COSE scores of the overall group were compared according to gender using an independent sample *t* test. With regard to age, years of counseling, and number of completed semester hours, the sample was divided into appropriate groups and an ANOVA was conducted on each appropriate variable. In each of the cases, a determination was made regarding whether pair-wise comparisons were warranted after the ANOVA was completed.

CHAPTER IV

FINDINGS

Introduction

This chapter will begin with a description of the demographic characteristics of the sample, including age, gender, number of credit hours completed in the Counselor Education and Counseling Psychology Department, and years of counseling experience. Descriptive statistics for the overall sample will then be presented and explained. Finally, results pertaining to the research questions addressed by this study will be presented. Assumptions underlying the analyses will be described as necessary with respect to their implications for interpretation of the results.

Description of Participating Students

The sample for this study consisted of graduate students enrolled in the Counselor Education and Counseling Psychology (CECP) Department who participated at the pre- and postadministration of the instruments and provided usable data sets. There were 61 total students in the sample, with 30 in the practicum group and 31 in the comparison group. As shown in Table 1, the mean ages of the two groups were similar to each other and to the overall mean age of the sample. Further, the ranges of ages in the two groups were similar, as were the standard deviations of the two groups. Table 2 illustrates that there were substantially more female students

than male students in the sample, with women comprising 77% of each group as well as of the overall sample.

Table 1
Ages of the Sample

	Range	Mean	<i>SD</i>
Overall (<i>N</i> = 61)	22–50	31.75	7.60
Practicum (<i>N</i> = 30)	24–50	32.93	7.00
Comparison (<i>N</i> = 31)	22–50	30.64	8.07

Table 2
Gender of the Sample

	Women	% Women	Men	% Men
Overall (<i>N</i> = 61)	47	77.05	14	23.00
Practicum (<i>N</i> = 30)	23	76.67	7	23.33
Comparison (<i>N</i> = 31)	24	77.42	7	22.58

The two groups differed in number of completed credit hours in CECP, as illustrated by Table 3. The practicum group had a higher mean number of course hours than the comparison group, and the comparison group showed much more within group variation on this variable. The groups were similar in their reported years of supervised counseling experience, as displayed in Table 4, with most students reporting no experience.

Table 3
Number of Credit Hours in CECIP

	Range	Mean	<i>SD</i>
Overall (<i>N</i> = 61)	0–60	28.00	15.86
Practicum (<i>N</i> = 30)	6–48	36.10	6.92
Comparison (<i>N</i> = 31)	0–60	20.16	18.10

Table 4
Years of Counseling Experience for the Sample

	Range	Mode	Mean	<i>SD</i>
Overall (<i>N</i> = 61)	0–25	0.00	1.80	3.91
Practicum (<i>N</i> = 30)	0–11	0.00	1.50	2.50
Comparison (<i>N</i> = 31)	0–25	0.00	2.10	4.94

Descriptive Statistics on the COSE for the Sample

Table 5 provides the total and subscale scores on the COSE for both the practicum and comparison groups. The table displays the mean total scores for the two groups at pre- and posttest, followed by the mean subscale score for the two groups at pre- and posttest. The practicum group demonstrated an increase on each of the scales at the posttest measurement. Similarly, the comparison group increased on all but the Cultural subscale. The increase in the total score for the treatment group was 20 points, noticeably higher than the 4-point increase for the comparison

group. The differences between the two groups' COSE scores were analyzed further using the analysis of covariance.

Table 5
Means on the COSE and Standard Deviations for the Sample

Scales	Practicum (<i>N</i> = 30)		Comparison (<i>N</i> = 31)	
	Mean	<i>SD</i>	Mean	<i>SD</i>
Pre Total	151.93	22.31	156.13	20.28
Post Total	171.97	15.74	160.52	20.81
Pre Micro-Skills	52.53	7.40	54.39	7.63
Post Micro-Skills	57.77	6.28	55.03	6.48
Pre Process	37.83	8.60	40.19	9.53
Post Process	46.03	5.97	43.00	8.22
Pre Difficult Behaviors	25.83	4.96	26.03	5.29
Post Difficult Behaviors	29.63	4.57	27.39	5.18
Pre Cultural	17.43	3.20	18.29	3.57
Post Cultural	18.97	3.06	17.77	2.64
Pre Values	17.97	3.09	17.45	3.05
Post Values	19.57	1.78	18.23	3.14

Results Relevant to Research Question 1

The first research question in this investigation asked whether there would be a significant difference between the practicum and comparison group posttest scores

on the COSE. To test this hypothesis, the researcher used the analysis of covariance. The experiment-wise level of significance used to measure statistical difference was set at $p = .05$, which translates to an individual analysis error rate of $p = .008$ using the Bonferroni procedure. The results of the first analysis of differences on the total COSE score are presented in Table 6. The covariates used in this analysis and in all of the analyses related to this research question were the pretest COSE scores, age, course hours, and years of experience. The results of this analysis illustrate that there is a significant difference between the groups on the total score of the COSE.

Table 6
Analysis of Covariance on Total COSE Scores

Source	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Group	2224.8	1	2224.8	13.86	0.000*
Error	8664.9	54	160.5		
Total Residuals	22185.4	59			

*Statistically significant when compared to a p value of 0.008.

Because a significant difference was detected between the two groups using the ANCOVA procedure, and because the existence of homogeneous regression slopes is the main assumption underlying the ANCOVA, an analysis to test the homogeneity of the regression slopes of the two groups was carried out to test the validity of significant findings (Huitema, 1980). Table 7 displays the results of this analysis. The alpha level is found to be not significant when considering the individual

test error rate of $p = .008$. Huitema (1980) also recommends using the Bonferroni procedure for experiment-wise significance level when testing the heterogeneity of regression slopes. This analysis illustrates that the slopes are indeed homogeneous and can be interpreted.

Table 7
Heterogeneity of Regression Slopes for Total Scores

Source	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Heterogeneity of Slopes	863.4	1	863.4	6.02	0.017
Error	8174.3	54	143.4		
Total Residuals	22193.7	59			

Another analysis recommended by Huitema (1980) when using the ANCOVA is a regression analysis to determine if the covariates chosen are actually contributing to the variation on the dependent variable, in this case the total score on the COSE. Table 8 displays the results of the regression analysis. The regression equation displays that each of the covariates is contributing to the overall variation in total scores on the COSE, with the pretest scores contributing the largest amount. The analysis also shows that the amount of variability of the total COSE scores explained by the covariates is statistically significant.

The following five analyses refer to the five subscales of the COSE in reply to the first research question. Table 9 displays the results of the ANCOVA using the scores on the Micro-Skills subscale as the dependent variable. This analysis reveals a

significant difference in scores between the practicum and comparison groups on the Micro-Skills subscale of the COSE. Because the analysis was found to be statistically significant, it was necessary to examine the assumption of homogeneity of regression slopes. The results of the heterogeneity of regression slopes test, displayed in Table 10, are not statistically significant, meaning that the ANCOVA can be interpreted.

Table 8
Regression Analysis for All the Covariates on the Total COSE Scores

Source	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Regression	11295.83	4	2823.92	14.26	0.000*
Residual Error	10889.67	55	198.00		
Total	22185.45	59			

Note. The regression equation is:

$$\text{Total} = 53.9 + .360 (\text{Age}) + .171 (\text{Hours}) + .522 (\text{Years}) + .629 (\text{Pretest}).$$

*Statistically significant when compared with *p* value of 0.05.

Table 9
Analysis of Covariance on Micro-Skills Subscale Scores

Source	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Group	192.5	1	192.5	8.36	0.006*
Error	1243.5	54	23.0		
Total Residuals	2504.9	59			

Table 10
Heterogeneity of Regression Slopes on the Micro-Skills Subscale Scores

Source	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Heterogeneity of Slopes	68.5	1	68.5	2.83	0.098
Error	1382.7	54	24.3		
Total Residuals	2518.3	59			

Tables 11 and 12 describe the findings of the analysis of the Process subscale of the COSE. Again, in this analysis a statistically significant difference between the practicum and comparison groups was found when compared to the *p* value of .008. The heterogeneity of regression slopes analysis is not statistically significant for this comparison; therefore, it is possible to interpret the resulting findings.

Table 11
Analysis of Covariance on the Process Subscale Scores

Source	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Group	357.21	1	357.21	11.82	0.001*
Error	1631.50	54	30.21		
Total Residuals	3294.98	59			

*Statistically significant when compared with *p* value of 0.05.

Table 12
Heterogeneity of Regression Slopes on the Process Subscale Scores

Source	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Heterogeneity of Slopes	99.7	1	99.7	3.49	0.067
Error	1627.9	54	28.6		
Total Residuals	3295.9	59			

Table 13 describes the results of the analysis of covariance between the practicum and comparison groups on the Difficult Behaviors subscale of the COSE. No statistically significant difference was found between the two groups on this analysis. No further analyses were required to test the homogeneity of regression slopes assumptions due to the nonsignificant finding.

Table 13
Analysis of Covariance on the Difficult Behaviors Subscale Scores

Source	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Group	45.87	1	45.87	3.18	0.080
Error	779.53	54	14.44		
Total Residuals	1480.93	59			

Tables 14 and 15 describe the results of the analysis of the Cultural and Values subscales of the COSE, respectively. Both analyses found no significant difference between the practicum and comparison groups on these two subscales.

Table 14
Analysis of Covariance on the Cultural Subscale Scores

Source	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Group	16.42	1	16.42	2.45	0.123
Error	362.07	54	6.71		
Total Residuals	501.65	59			

Table 15
Analysis of Covariance on the Values Subscale Scores

Source	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Group	12.74	1	12.74	1.92	0.172
Error	358.73	54	6.64		
Total Residuals	414.18	59			

Results Relevant to Research Question 2

This section describes the findings of the data relevant to the second research question, which asked whether there would be a difference in scores on the COSE

between pre- and posttest measurements for the practicum group. Table 16 presents the results relevant to this question. The means, standard deviations, and correlated samples *t* test analysis of differences between pre- and posttest scores on the subscales of the COSE for the practicum group are illustrated in this table. Due to the multiple analyses performed to answer this research question, it is necessary to adjust the individual analysis level of significance. To allow for an experiment-wise error-rate of $p = .05$, the significance level for each analysis was set at $p = .008$ using the Bonferroni procedure.

Table 16
Differences Between Pre- and Posttest Scores
on the COSE for the Treatment Group

Scales	Differences			
	Mean	<i>SD</i>	<i>t</i>	<i>p</i>
Total	20.03	16.38	6.70	0.000*
Micro-Skills	5.23	6.39	4.48	0.000*
Process	8.20	6.70	6.70	0.000*
Difficult Behaviors	3.80	3.47	6.00	0.000*
Cultural	1.53	2.42	3.47	0.002*
Values	1.60	3.41	2.57	0.016

*Statistically significant when compared to *p* value of .008.

Statistically significant differences were found on the total score and on four of the five subscales of the COSE. Though no significant difference was found at the

posttest on the values subscale, there was an increase of 1.6 points on mean level of self-efficacy for this subscale.

Results Relevant to Research Question 3

The third research question under investigation asked whether there would be a difference in scores on the subscales of the COSE between pre- and posttest measurements for the comparison group. Table 17 describes the results relevant to this research question. To allow for an experiment-wise error-rate of $p = .05$, the significance level for each analysis was set at $p = .008$ using the Bonferroni procedure.

Table 17
Differences Between Pre and Post Scores on the COSE
for the Comparison Group

Scales	Differences			
	Mean	<i>SD</i>	<i>t</i>	<i>p</i>
Total	4.39	12.41	1.97	0.058
Micro-Skills	2.32	9.35	1.38	0.177
Process	2.80	7.85	1.67	0.083
Difficult Behaviors	1.35	3.95	1.91	0.066
Cultural	-0.52	2.72	1.06	0.299
Values	0.77	2.91	1.48	0.148

The means, standard deviations, and the results of the *t* test analyses are presented in Table 17. No statistically significant differences were found between pre- and posttest measures on the total score or the subscale scores of the COSE for the comparison group. In fact, the score for the comparison group decreased on the Cultural subscale at posttest.

Results Relevant to Research Question 4

The fourth research question investigation concerned differences on posttest scores of the COSE based on demographic conditions. For this question, groups were compared based on gender, age, hours of coursework in CECp, and years of counseling experience. Within the practicum group, subgroup comparisons were also made based on the number of client contact hours and number of supervision hours received during the practicum.

Table 18 displays the means and standard deviations for women and men on the total scores and subscale scores of the COSE. Because the number of women in the sample was much larger than the number of men, further analysis would not reveal valid results. An examination of the means shows that men display a higher mean value on the total scale and three subscales, and women display higher mean values on two subscales. The differences appear to be minimal for each scale.

The other groups of demographic variables consisted of more continuous data which required separation into appropriate groups for further analysis. Table 19 displays the make-up of the various groups used for comparison. The table includes the number of groups based on each variable as well as the range, number of participants per group, percentage of participants per group, the mean total score on

Table 18
Posttest Scores on the COSE Based on the Gender of the Sample

Scales	Women (<i>N</i> = 47)		Men (<i>N</i> = 14)	
	Mean	<i>SD</i>	Mean	<i>SD</i>
Total	164.85	20.93	170.50	11.43
Micro-Skills	56.04	6.83	57.05	5.20
Process	42.94	7.42	47.71	6.29
Difficult Behaviors	28.19	5.34	29.50	3.46
Cultural	18.62	2.89	17.50	2.82
Values	19.06	2.61	18.29	2.70

the COSE, and standard deviations. The years of counseling experience variable could not be adequately divided into groups because the vast majority of participants reported 0 years of experience; therefore, further analysis beyond reporting means and standard deviations would be inappropriate for years of experience. The groups that were formed based on the other variables, however, were appropriate for further analysis. Table 20 displays the findings of one-way analyses of variance for the various comparison groups based on the total score on the COSE.

To maintain an experiment-wise error rate of $p = .05$ the individual analysis level of significance was set at .0125 based on the Bonferroni procedure. No significant differences were found based on the age or number of credit hours for the entire sample. Furthermore, no significant differences were found within the practicum group based on number of client or supervision contact hours.

Table 19
Analysis of Frequencies, Percentages, Means, and
Standard Deviations of the Sample

				Total COSE Score	
Variables	Range	<i>n</i>	Percentage	Mean	<i>SD</i>
Age (<i>N</i> = 61)					
Group 1	22–27	17	28.3	169.39	19.05
Group 2	28–31	16	26.7	158.76	19.19
Group 3	32–38	13	21.4	172.78	21.01
Group 4	38–50	14	23.3	162.92	14.93
Credit Hours Completed (<i>N</i> = 61)					
Group 1	0–27	21	34.4	161.33	21.00
Group 2	28–36	19	31.2	169.00	15.95
Group 3	37–60	21	34.4	168.38	20.06
Years of Experience (<i>N</i> = 61)					
Group 1	0 – 0	36	59.0	164.72	20.52
Group 2	1 – 4	16	26.2	172.43	15.30
Group 3	5–25	8	14.8	160.00	19.39
Client Contact Hours (<i>N</i> = 30)					
Group 1	1 – 8	10	33.3	165.30	9.44
Group 2	9–11	10	33.3	178.50	19.65
Group 3	12–20	10	33.3	172.10	15.04
Supervision Contact Hours (<i>N</i> = 30)					
Group 1	2 – 9	8	27.6	173.25	13.90
Group 2	9.25–12	7	24.1	175.71	12.34
Group 3	13–17	7	24.1	173.86	13.32
Group 4	18–29	7	24.1	162.14	19.74

Table 20
Analysis of Variance on Total COSE Scores of the Sample

Variable	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Age	52.95	3	17.65	2.20	0.098
Credit Hours Completed	746.05	2	373.03	1.00	0.371
Client Contact Hours	671.47	2	435.73	1.86	0.175
Supervision Contact Hours	799.56	3	266.52	1.11	0.364

CHAPTER V

SUMMARY, DISCUSSION, AND RECOMMENDATIONS

In this final chapter, the research project is summarized and the findings discussed. Implications of the findings are also discussed, along with recommendations for future research.

Summary

The early research on self-efficacy found that by increasing one's belief in ability to perform a certain behavior, one could enhance the actual performance of the behavior. This basic premise has been shown to be true in a number of different areas, from sports performance to vocational choice. The initial research in self-efficacy focused on the effectiveness of psychological interventions. There is now a considerable body of research that links an increase in self-efficacy to positive outcomes in psychological treatment. From this initial focus on self-efficacy in psychological treatment, research on self-efficacy moved quickly to the area of teaching and learning, and it was found that increases in self-efficacy beliefs coincide with increases in learning. The most recent step in the research progression on this construct, as far as the current research is concerned, is the movement to research on the link between beliefs of self-efficacy and counseling skill development.

This study was designed for the purpose of determining whether practical counseling training has an effect on counselor trainees' belief of self-efficacy. To

explore this issue, the study was designed to gather information regarding master's level trainees in a counseling program. Specifically, 30 master's students involved in a counseling practicum were measured on their level of counseling self-efficacy at the beginning and end of the practicum semester. Their beliefs of self-efficacy were then compared to a second group of 31 master's students who had not had and were not currently enrolled in the counseling practicum. The unique features of this study, as compared to other studies of counselor self-efficacy, were the use of a comparison group to examine the specific effectiveness of practical training, the use of a large enough sample to make inferential statements, and the use of pre- and posttest measures to illustrate the change in self-efficacy beliefs during the course of counselor training.

The sample of students completed the Counselor Self-Estimate Inventory (COSE) at the beginning of the semester and again at the end. The students also completed a survey designed by the researcher to gather certain demographic information about the participants. The data collected from the entire sample included total scores on the COSE at pre- and posttest and scores on the five subscales of the COSE, which consist of Micro-Skills, Process, Difficult Behaviors, Cultural, and Values.

The demographic information collected from the entire sample consisted of age, gender, number of completed credit hours in the Counselor Education and Counseling Psychology Department (CECP), and years of supervised counseling experience. For purposes of ensuring the validity of the sample, the participants were also asked if they had previously enrolled in the counseling practicum.

The data were analyzed using the analysis of covariance (ANCOVA) to identify any differences between the two groups on the various scale scores of the

COSE. *t* tests and the analysis of variance (ANOVA) were also utilized to investigate the findings relevant to Research Questions 2, 3, and 4. A discussion and interpretation of the research findings follows.

Discussion of Findings

Results Relevant to Research Question 1

The first research question addressed in this study investigated the effects of practical counseling training as compared with basic counseling coursework: “Is there a significant difference on scores on the COSE at the end of a semester of counseling training between trainees enrolled in a practicum and those enrolled in basic counseling coursework?” The variable examined was practicum training and its relative effect on beliefs of self-efficacy in the context of counseling training. Prior to collecting and analyzing the data, the researcher believed that the group of students involved in the practicum would demonstrate higher scores on the COSE; therefore, a significant difference between the practicum and comparison group scores was expected by the researcher.

Summary of Results

Testing for a significant difference between the two groups involved calculating analyses of covariance on the total score and on each of the five subscale scores of the COSE. For each of the analyses, the covariates used were pretest scores on the COSE, completed hours in the CECP Department, years of counseling experience, and age. In the first analysis, the mean scores for the practicum and comparison groups on the total score of the COSE were compared, and a significant

difference was found. This means that there was a difference in overall self-efficacy scores between the group that received practical training and the group that did not receive practical training.

The second analysis compared the two groups' mean scores on the Micro-Skills subscale of the COSE. The difference between the scores on this subscale was statistically significant when tested using the analysis of covariance. In the third analysis, examining the Process scale of the COSE, a significant difference was again found between the mean scores of the two groups. In the fourth analysis, testing the difference between the groups' scores on the Difficult Behaviors subscale of the COSE, no significant difference was found. In the fifth analysis, concerning the Cultural scale of the COSE, no significant difference was found between the two groups' scores. Again, in the sixth analysis there was no significant difference found between the two groups' scores on the Values subscale. It appears that the two groups differed on three of the six scales of the COSE. In all of the analyses, the practicum group scores on the COSE were found to be higher, indicating higher levels of self-efficacy than those of the comparison group.

Discussion of the Findings

The implications of these results relevant to Research Question 1 are important to the overall purpose of the study. The results are mixed but do demonstrate that counseling practicum training has an effect on beliefs of self-efficacy, as anticipated by the researcher. When compared to training received in basic counseling coursework, it is clear that the practicum has a greater positive effect on perceptions of self-efficacy. Historically, research on self-efficacy has demonstrated that among many variables, performance accomplishments have the

greatest effect on self-efficacy (Bandura, 1977a). Consequently, it makes sense that any sort of practical training would be advantageous. It is assumed in this study that the difference in training received during the test period resulted in the difference in scores. This assumption is aided by the design and analysis of the research.

The test used in answering Research Question 1 was the analysis of covariance. This analysis was chosen because it provides for a more powerful design when a randomized experiment is not possible. Because the researcher was interested in the actual training received by students as they progressed through a counseling program, it was impossible to randomly assign participants to treatments. At the same time, the researcher was interested in controlling for as much of the variation between the two groups as possible. The covariates were selected based on the researcher's belief in their possible effect on scores on the COSE. It was the researcher's assumption in designing this study research that levels of self-efficacy could be affected by several variables, particularly pretest level of self-efficacy as measured by the COSE, completed hours in CECP, years of counseling experience, and age. For this reason, these variables were used as covariates.

The covariates used ensured that the two groups were held to be statistically similar on the covariates. Any variability in scores on the COSE that could be accounted for by the covariates was eliminated. This means that any differences observed were likely to be due to something other than the covariates, such as the difference in training. Causal statements regarding practical training and beliefs of self-efficacy cannot be made, but by using the current design and the appropriate analysis, the likelihood that the difference in posttest self-efficacy scores can be attributed to the different training experiences increases. The regression analysis presented in Table 8 demonstrates that all of the covariates are affecting the

variability in the score on the COSE. As might be expected, among the covariates, the pretest level of counseling self-efficacy explained the largest amount of variability.

As a result of the analyses related to the first research question, significant differences were found between the groups on the total score and on the Micro-Skills and Process subscales of the COSE. No significant differences were discovered between the two groups on the Difficult Behaviors, Cultural, and Values subscales.

It was the researcher's initial belief that significant findings would be discovered in each of the comparisons, but upon further consideration, the actual results are not inconsistent with the original hypothesis. As predicted, the overall sense of self-efficacy increased more for the practicum group than for the comparison group. The total score is simply the accumulation of the scores on the five subscales. Results on the subscales were mixed, with two showing significant differences and three showing no significant differences. Micro-Skills and Process were the areas measured by the COSE in which the practicum group scored higher. These findings make sense when one considers the nature of the training these individuals have received up to this point and the focus of the practicum training. The basis of the performance of counseling is an understanding of basic techniques, often referred to as micro-skills. These micro-skills include active listening, probing, and interpretation. For students to be able to perform as counselors, they will need to be adept at using these basic skills. The training provided prior to entering the counseling practicum includes training in micro-skills in one form or another. Also, the focus of the counseling practicum is generally on the techniques and process of counseling. For these reasons, the trainees are probably more comfortable operating in these areas than in areas that have not been emphasized in their training. The assumption of this research is that as practical experience is gained, self-efficacy and

eventually performance of skills will also improve. Since the students have been exposed to the micro-skills and process of counseling on a regular basis during the practicum, one would expect self-efficacy in these areas to have increased.

One aspect of self-efficacy that may be related to the learning of complex sets of behaviors like counseling skills is anxiety reduction. For many trainees, performing as a counselor can be difficult and anxiety-producing. To be effective, trainees must have knowledge of the skills and process of counseling, but they also must have knowledge regarding personality, mental illness, and interpersonal relationships, while at the same maintaining an awareness of the dynamics of the counseling relationship as they unfold. This level of complexity can be difficult to manage and may cause increased levels of anxiety, which may in turn have an adverse effect on performance. Self-efficacy has been shown in the literature to be inversely related to anxiety. If this is true, it may also be true that by increasing self-efficacy in the basic areas of micro-skills and counseling process, practicum training can lower the levels of anxiety felt by the participants, allowing them to perform at higher levels. It may also be true that by addressing trainees' feelings of anxiety, self-efficacy beliefs can be increased.

One observation resulting from the current research concerns the effectiveness of including practical training in preparing master's level counselors. At least this particular sample of students increased their sense of self-efficacy, and we would assume they increased their ability to perform as counselors as well.

Results Relevant to Research Question 2

It will be recalled that the second research question addressed by this study investigated changes in self-efficacy during a counseling practicum: "Is there a significant difference between pre- and posttest measures of counseling self-efficacy

during a semester-long master's-level counseling practicum?" In essence, answering this question involved examining differences in scores over time for one group of practicum students. The hypothesis represented the researcher's initial belief that exposure to the counseling practicum would result in an increase in trainees' beliefs of self-efficacy. The difference between this question and the first research question is that this question examines the change in self-efficacy beliefs within the practicum group, while the first question involved a comparison between the practicum and nonpracticum groups.

Summary and Discussion of Results

Testing for the second research question involved running six correlated sample *t* tests in which the scores on the total COSE and the five subscales for the practicum group were compared at pre- and posttest. In the set of six *t* tests, five were found to be significantly different and one was not. The Values subscale was not found to be significant. In all of the comparisons, including the one found not to be significant, the posttest scores were higher, indicating increased levels of self-efficacy.

The implications of these results are fairly clear. The results generally support the initial hypothesis that practical counseling training would have a positive effect on beliefs of self-efficacy. In fact, this was true in five of the six analyses. Even the scores on Difficult Behaviors and Cultural differences are significantly higher in these analyses, suggesting that training does in fact have an effect on these areas, a finding not clearly supported by the analyses related to Research Question 1. Given these results, it can be said that the trainees felt an overall increase in their ability to perform counseling on practically all areas measured by the COSE.

It is difficult to say with much certainty why the participants' scores on the Values subscale did not demonstrate a significant change from pretest to posttest. However, this may be due, as was suggested earlier, to the relative persistence of a person's value system, suggesting that values are more resistant to change than are other factors that impact counseling skills. Also, the main focus of the training and supervision in the practicum is not on the values of the trainees. Thus, an increase in this area should not necessarily be expected.

Unlike the first research question, the groups used in this example are in effect identical. For this reason it can be expected that differences based on the individuals in the separate groups are almost eliminated, because the people are the same. Again, causal statements cannot be made, but the basic hypothesis that self-efficacy will increase during practicum training is supported.

Results Relevant to Research Question 3

The third research question investigated changes in self-efficacy related to basic counseling coursework: "Is there a significant difference between pre- and posttest measures of counseling self-efficacy after basic counseling courses such as research methods, group dynamics, and community agency counseling?" The research hypothesis was that there would be no significant differences found. In other words, no increase in beliefs of self-efficacy were anticipated in the comparison group.

Summary and Discussion of Results

To test for differences between the pre- and posttest comparison group scores on the total COSE and the five subscales, six correlated samples *t* tests were utilized.

In each of the six t tests, no significant findings were noted. In fact, on the Cultural subscale, there was a decrease on the posttest measure for this group.

These results clearly indicate that the comparison group did not show an increase in beliefs of counseling self-efficacy after a semester in training. This finding supports the initial hypothesis that no significant differences would be discovered within this group. Further, the basic hypothesis of the research that practical training is vital to increasing self-efficacy and eventually increasing performance is also supported. However, it must be clear that these results do not say that basic counseling training is not important, just that in this case no significant differences were observed between pre- and posttest, which suggests that one semester of basic counseling coursework is not likely to increase beliefs of self-efficacy for performing counseling skills. Although the differences were not significant, slight posttest increases were noted in five of the six scales. It is possible that basic counseling training is essential to performing well in the practicum, so that adequate training at this level prepares students for the more dramatic increases in self-efficacy that may occur during practical training. For instance, the knowledge students gain during coursework may be key to allowing them to make the best use of future experiences, including practicum.

Results Relevant to Research Question 4

It will be recalled that the fourth research question investigated differences in self-efficacy related to demographic variables: "Is there a significant difference in the level of self-efficacy between trainees based on general demographic information?" The variables investigated for the total sample were gender, age, completed credit hours in CECP, and years of counseling experience. Number of client contact hours

and number of supervision contact hours were also investigated for the practicum group. The research hypothesis was that there would be no significant differences in level of self-efficacy based on these demographic variables. The groups were examined using either analysis of variance or basic descriptive statistics. Overall, the research hypothesis was supported; there do not appear to be any differences on posttest scores on the COSE for any of the groups listed above.

Summary and Discussion of Results

To examine differences in scores based on gender, descriptive statistics, including means and standard deviations, were used. Inferential analyses were not used since there were notably more women than men in the sample. The results related to this question were mixed, with men scoring higher on three of the subscales and the total score, and women scoring higher on two subscales. Men scored higher on the Micro-Skills, Process, and Difficult Behaviors subscales, and women scored higher on the Cultural and Values subscales. Since the differences were not statistically tested, statements about the results must be made with caution. Also, the differences between men and women are small on all of the subscales. For this reason, it seems that gender is not a factor that affects the increase in self-efficacy in this particular study.

Years of experience were also examined using simple descriptive statistics, because most of the participants involved in the research reported no previous counseling experience. From the descriptive statistics, it was demonstrated that there do not seem to be differences in reported levels of self-efficacy based on years of experience. This seems to go against the findings of the current research, but it must be remembered that the design of this research is not set up specifically to answer this

question. Perhaps future research should be designed to examine the effect of years of experience on self-efficacy.

The sample was divided into three age groups, each containing 33% of the total sample. To test differences between the three groups on level of counseling self-efficacy, an analysis of variance was used. No significant differences were noted between the groups. This seems to indicate that although age was shown to be related to level of self-efficacy in the earlier regression analysis, there is no significant difference in level of self-efficacy based on age. The implication of this finding is that counseling self-efficacy may not be related to the age of individual.

As for credit hours completed, the sample was divided into three relatively equal groups. Differences between the three groups on level of self-efficacy were tested for using the analysis of variance. No significant differences were found between the groups. This finding seems to indicate that counseling credit hours completed did not impact beliefs of self-efficacy. Again, the research hypothesis was supported, but this does not mean conclusively that completing credit hours in counseling has no effect on self-efficacy.

With regards to client contact hours for the practicum group, the sample was divided into three groups of about the same size. Differences between the three groups were tested using the analysis of variance. Once again there were no differences between the groups, and the research hypothesis was supported. This finding indicates that the number of reported client contact hours did not make a difference in levels of counseling self-efficacy. It should be noted, however, that the number of client contact hours was generally very limited. It may be that increases in contact hours would correlate with greater changes in self-efficacy.

The final variable was supervision contact hours. The sample was divided into four relatively similar groups. Differences between the groups on level of self-efficacy were tested using the analysis of variance. No significant differences were found between the four groups. This finding tends to support the hypothesis that no difference would be found. The amount of supervision received by the trainees in the practicum did not affect their level of self-efficacy. This is an area along with number of client contact hours that may be worth further review.

Overall, the demographic characteristics of the participants in this sample in this particular study did not seem to be related to level of self-efficacy as measured by the COSE. Taken together, the primary findings of this research effort indicate that practical counseling training has a positive effect on level of beliefs of self-efficacy in counselor training.

Suggestions for Future Research

A review of the findings and implications of this study suggests there would be a value in replicating and expanding this line of research. Based on the findings of this study and the findings of related studies published in the literature, the researcher would recommend that similar research efforts be conducted with various designs and levels of comprehensiveness. Collecting data on actual performance of counseling trainees and investigating the link to actual counseling performance seems important. The relationship between a person's level of self-efficacy and actual performance of behaviors has been well established in the self-efficacy literature, but not specifically related to counseling self-efficacy. Such research might use supervisor ratings of trainee's counseling performance or client's ratings of counselor performance as measures for the dependent variable.

Another recommendation for future research would be to examine changes in self-efficacy at various levels of counselor training. It would be interesting to see changes in self-efficacy during a field practicum, that is, when a student is receiving practical counseling training while working at a counseling agency. Perhaps changes would be seen in level of self-efficacy in the areas that were not noted in the current research, specifically the Difficult Behaviors, Cultural, and Values subscales of the COSE as the trainee gains experience in these areas.

The researcher also recommends the examination of counselors who are beyond training and are working in the field. All of the research to this point in the area of counselor self-efficacy has focused on student trainees and is therefore not applicable beyond this population. It would be interesting to see whether self-efficacy continues to increase with experience and continued counselor development. Research that uses professionals working in the counseling field with various levels of experience and areas of expertise might expand the utility of self-efficacy. Research that links the theory of self-efficacy to counselor development beyond trainees to professionals with various levels of experience may be helpful in understanding how a counselor becomes an effective helper (Stoltenberg, McNeil, & Delworth, 1998).

To further understand the concept of counselor self-efficacy, it may be helpful to know how a person's belief of self-efficacy changes when learning a new theory of counseling or a new technique, or when working with a new population. Counselors are continuously facing new opportunities and challenges that may cause them to question their competence. Self-efficacy may be a construct that would allow researchers to measure changes in counselors' development of confidence and competence as they are faced with new situations.

Summary and Conclusions

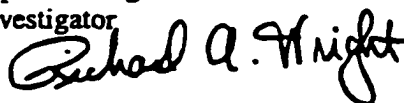
This study examined the impact of master's level counseling practicum training on trainees' beliefs of self-efficacy for counseling performance. The findings provide support for the hypothesis that practicum training has more of an effect on perceptions of self-efficacy than basic counseling coursework training. This study also provides strong support for the hypothesis that beliefs of self-efficacy significantly increase during a semester-long counseling practicum. These findings offer a deeper understanding of the cognitive processes occurring during the learning of counseling skills and process.

Appendix A
Human Subjects Institutional Review Board
Letter of Approval

Human Subjects Institutional Review Board

Kalamazoo, Michigan 49008-3899

WESTERN MICHIGAN UNIVERSITY

Date: 4 May 1998**To:** Edward Trembley, Principal Investigator
Matt Rushlau, Student Investigator**From:** Richard Wright, Chair**Re:** HSIRB Project Number 98-04-10

This letter will serve as confirmation that your research project entitled "An Examination of Self-Efficacy in Masters Level Counselor Trainees" has been **approved** under the **exempt** 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: 4 May 1999

Appendix B
End-of-Semester General Questions

General Questions

Personal Identification Number _____
(zip code plus last 4 digits of SSN)

How many client contact hours have you had in this practicum? _____

How many supervision contacts have you had this semester? _____
(includes times you received face to face supervision contacts, not necessarily pre-arranged formal supervision)

Please describe in the space below any circumstances that have occurred outside of the practicum that may have adversely affected your counseling training during the course of the practicum.

Appendix C
Demographic Survey

Demographic Survey

Personal Identification Number _____
(zip code plus last 4 digits of SSN)

Age: _____

Gender: Female _____ Male: _____

Have you taken CECP 612 Counseling Practicum prior to the current semester?

yes _____

no _____

How many semester hours have you completed in CECP prior to this semester? _____

How many years of supervised counseling experience have you had? _____
(This may include crisis line work, volunteer work, work as a Psychology Tech. at a hospital, etc.)

Appendix D
Letter of Permission and Description
of the COSE Instrument

Matthew G. Rushlau
2210 Hillsdale
Kalamazoo, MI 49006

Dear Dr.:

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. Please note that because the COSE is copyrighted the instrument should not be published in a dissertation. Rather a dissertation should use a description of the instrument which does not include actual items.

I have enclosed a copy of the instrument. The instructions read for people to indicate their answers on the instrument. An alternative which 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 reversed 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: Item 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 3: Dealing with Difficult Client Behaviors: Items 15, 20, 24, 25, 26, 27, 28.

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.

The relevant literature for these measures includes:

Larson, L. M. (1998, March). The social cognitive model of counselor training (Monograph). Major contribution for The Counseling Psychologist.

Larson, L. M. (1998, March). Making it to the show: Four criteria to consider. (Response to Four Reactants) Major contribution for The Counseling Psychologist.

Larson, L. M. & Daniels, J. (1998, March). Review of the counseling self-efficacy literature (Monograph). Major contribution for The Counseling Psychologist.

Larson, L. M., Suzuki, L., Gillespie, K., Potenza, M. T., Toulouse, A. L., & Bechtel, M. A. (1992). The development and validation of the Counseling Self-Estimate Inventory. Journal of Counseling Psychology, 39, 105-120.

Best wishes in your research endeavors.

Sincerely,



Lisa M. Larson, Ph.D.
1305 Plum Ridge Road
Lincoln, NE 68527

encl.

Appendix E
Oral Recruitment Statement

Oral Recruitment Statement

“Hello, My name is Matthew Rushlau and I’m a doctoral student in the Counseling Psychology program. I’d like to thank (insert instructor’s name) for allowing me to visit your class today. I’m here conducting my dissertation research project. If you agree to participate in my dissertation, you will be asked to complete a questionnaire containing 37 items. This should take approximately 10 minutes and I will ask you to complete it here in class today and again at the end of the semester.”

“The purpose of my research is to examine student perceptions of their ability to perform counseling skills. This information may assist faculty in the design of counseling programs and in the training of counselors. Participation in this project is completely voluntary, and there is no penalty if you choose not to participate. Also, you need to know that your responses are completely confidential. Your instructor and the department will have no way of obtaining information about your responses. Completed questionnaires will be stored in a locked file cabinet during the course of the project and the data being collected will only be reported in group form. At this time I ask that you sign the consent form . . .”

(Facilitator then reviews components of the consent form.)

“Your name will not appear on the questionnaire but I will ask you to place a personal identification number consisting of your zip code and last 4 digits of your social security number on the top of the demographic survey. Please turn the page and answer the questions on the demographic survey. Please do not place your name on either the demographic survey or the questionnaire.

(Facilitator waits a few minutes while participants complete demographic survey)

Once you have completed the survey please begin the questionnaire by reading the directions and answering the first question. If the instructions are unclear, I will be happy to answer any questions you have.”

(As each participant gives the forms to the facilitator, the facilitator will say “thank you” to each participant)

Appendix F
Informed Consent

Informed Consent

**Western Michigan University
Department of Counselor Education and Counseling Psychology**

Principal Investigator: Edward Trembley, D.Ed.

Research Associate: Matthew Rushlau, M.A.

You are invited to participate in a research project entitled “Examination of Self-Efficacy in Masters Level Counseling Training.” This research is intended to study how your perceptions change as a result of counselor training. This research is Matthew Rushlau’s dissertation project. You will be asked to complete a demographic survey consisting of 6 items and a questionnaire comprised of 37 items. These surveys will take approximately 10 minutes to complete, and you will be asked to complete the surveys now and at the end of the semester. Your replies will be completely anonymous so do not put your name on either of the forms. You may refuse to participate or quit at any time during the study without penalty and without effect on your course grade. returning the survey completed indicates your consent for the use of the answers you provide. If you have any questions, you may contact Edward Trembley at 387-5100, Matthew Rushlau at 345-5461, the Human Subjects Institutional Review Board at 387-8293, or the Vice-President for Research at 387-8298.

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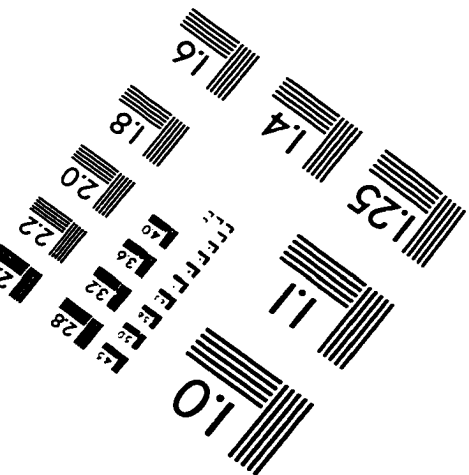
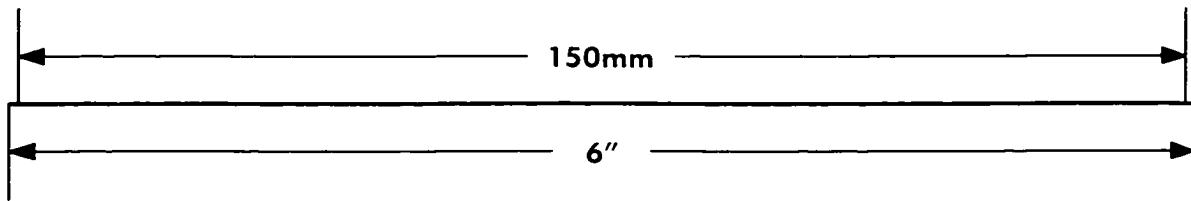
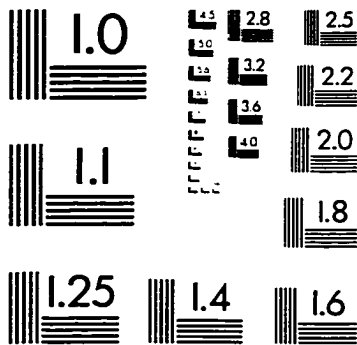
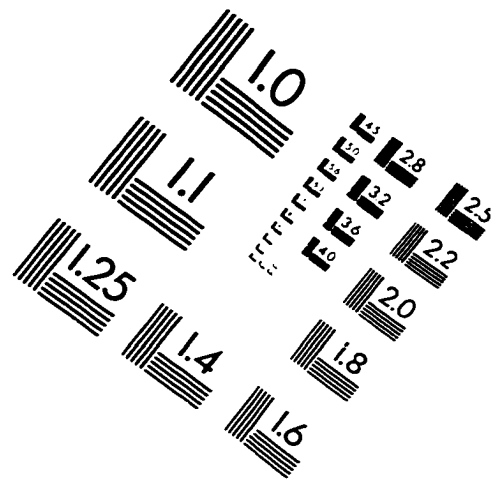
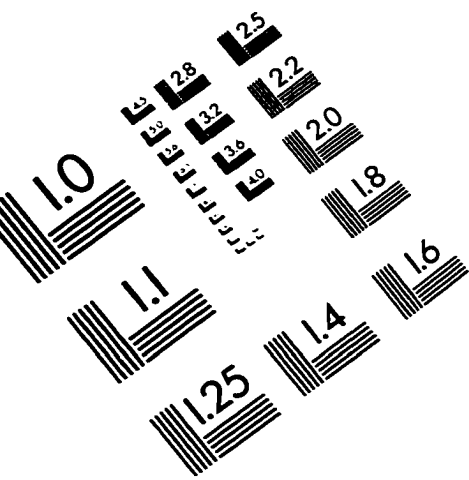
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IMAGE EVALUATION TEST TARGET (QA-3)



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