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AN INVESTIGATION OF COUNSELOR EDUCATORS' ATTITUDES TOWARDS
EVIDENCE-BASED PRACTICES AND PERCEIVED BARRIERS TO THE
INCORPORATION OF EVIDENCE-BASED PRACTICES IN COUNSELOR EDUCATION
CURRICULA

by

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A dissertation submitted in partial fulfillment of the requirements
for the degree of Doctor of Philosophy in Counselor Education
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ABSTRACT

The overall purpose of this study was to investigate counselor educators' attitudes towards evidence-based practices (EBPs) and perceived barriers to the inclusion of EBPs in counselor education curricula. Additionally, this study aimed to assess whether counselor educators' level of agreement towards the presence of motivational interviewing (MI) principles in the counseling relationship impacted attitudes towards EBPs. As such, this researcher analyzed four research questions using two instruments and a demographic questionnaire. Two hundred sixty nine counselor educators (39.8% response rate) from the Association of Counselor Education and Supervision responded to an electronic survey, which consisted of the Evidence-Based Practice Attitude Scale (EBPAS; Aarons, 2004), the BARRIERS Scale (Funk, Champagne, Wiese, & Tornquist, 1991), and a demographic questionnaire.

Specifically, this study investigated four research questions to determine: (a) the difference in attitude towards adopting EBPs among counselor educators with respect to specific individual factors (i.e. specialized training in evidence-based practices, years of professoriate experience, and primary counselor education focus); (b) the difference in perceived barriers towards adopting EBPs into counselor education curricula among counselor educators with respect to organizational factors (i.e. type of program, status of CACREP accreditation, and faculty position); (c) the influence of EBP attitude on perceived barriers to the inclusion of EBPs in counselor education curricula; and (d) the correlation between counselor educators reported level of agreement towards MI principles' presence in the counseling relationship and their attitude towards EBPs. Multivariate analyses of variance (MANOVA) were computed to analyze

the data for the first two research questions, while linear regressions were utilized to compute the data for the last two research questions.

In terms of individual factors, study results indicated that neither specialized training in EBPs nor years of professoriate experience resulted in significant differences with regards to attitudes towards EBPs. However, data analysis did reveal a significant difference between counselor educators with a clinical focus and counselor educators with a vocational focus. With regards to organizational factors influence on perceived barriers to the inclusion of EBPs in counselor education curricula, analyses revealed that neither CACREP accreditation nor faculty position resulted in any significant differences. Although, analysis did reveal that counselor educators in masters only programs perceived significantly less barriers to the inclusion of EBPs than did counselor educators in doctorate granting programs. Furthermore, results suggested a negative correlation between attitude towards EBPs and barriers towards the inclusion of EBPs in counselor education curricula, and a positive correlation between counselor educators' agreement towards the inclusion of MI principles in the counseling relationship and their attitudes towards EBPs. Limitations of the study, implications for this study, and recommendations for future research as it relates to EBPs in counselor education and the counseling profession are addressed.

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CHAPTER ONE: INTRODUCTION

The overall goal of counselor education is to promote the growth of the counseling profession. As such, counselor educators foster the development of clinical skills within student-counselors to ensure that future clients receive the best counseling services possible (Spruill & Benshoff, 2000). In addition to nurturing the growth of the student-counselors, counselor educators are tasked with preparing their students for the professional environment of counseling (Smith, 1999). Thus, counselor educators have an ethical responsibility to possess an awareness regarding the current state of the counseling profession and maintain a working knowledge of current and innovative practices in counseling.

In terms of the current state of the counseling profession, managed healthcare has significantly impacted the services that clients receive. For example, an increasing number of counselors are challenged to provide effective brief therapy (Rosenberg & Wright, 1997; Stirman, Crits-Chistoph, & DeRubeis, 2004), as many insurance providers will only cover clients for a select number of counseling sessions (Sheperis, Sheperis, Simpson, Balkin, & Watson, 2009). As such, counselors often only receive third party reimbursement for interventions that are empirically supported by research (Sheperis et al.), which limits the range of services that they can provide their clients (Smith, 1999). Therefore, many professional counselors must implement efficient and effective interventions in a brief period of time.

Recently, many professional helpers have begun taking part in a movement to utilize evidence-based practices (EBPs) with their clients (Madson, 2005). The American Psychological Association (APA, 2005a) defined EBP as, "the integration of best available research with clinical expertise in the context of patient characteristics, culture, and preferences" (p. 1).

Additionally, the APA (2005a) noted that *best available research* refers to valid and reliable statistical results related to the impact of interventions on client problems in laboratory and field settings. Furthermore, validity of an intervention is drawn from observations of randomized clinical trials (APA, 2002). *Clinical expertise* refers to the clinician's ability to assess the risks and benefits of potential interventions, and *patient characteristics, culture, and preferences* refer to the qualities that the client brings to the therapeutic relationship (Collins, Leffingwell, & Belar, 2007). Thus, EBP is the integration of these essential components (the research, the clinician, and the client).

EBP arose in response to managed healthcare demands for treatment accountability with regards to client outcomes (Crane & Hafen, 2002; Patterson, Miller, Carnes, & Wilson, 2004). Medical research initiated the EBP movement when the Department of Clinical Epidemiology and Biostatistics at McMasters University in Canada established the principles of EBP in the 1980s (Oxman, Sackett, & Guyatt, 1993). Since that time, various helping fields, such as psychiatry, psychology, and social work education began adopting this movement into their teachings (Chwalisz, 2000; Shernoff, Kratochwill, & Stoiber, 2003; Woody, D'Souza, & Dartman, 2006). Slowly, it seems that the counseling profession has begun to adopt the EBP movement (Sheperis et al., 2009).

Recent revisions to the American Counseling Association's (ACA) *Code of Ethics* (ACA, 2005) spoke specifically to counselor and counselor educators' responsibilities towards the knowledge of EBPs (Kocet, 2006). For example, Standard C.6.e. emphasized that counselors should use techniques/procedures/modalities that have an empirical foundation, and Standard F.6.f. stressed that if counselor educators teach counseling techniques/practices that are

innovative, or without empirical foundation, then they must define the interventions as *unproven* and *developing* while explaining the potential risks and ethical considerations of the interventions. As such, it seems that the national professional organization of the counseling profession has recognized the importance of training counselors to implement EBPs. Yet, despite the EBP movement in the helping felid, the research-practice gap continues to widen in the counseling profession (Murray, 2009).

A number of scholars have proposed that the widening research-practice gap in the counseling profession could be attributed to student-counselors receiving inadequate training in EBPs from counselor educators (Anderson & Heppner, 1986; Bangert & Baumberger, 2005; Martin & Martin, 1989). Whiston and Coker (2000) suggested that counselor educators struggle to integrate EBPs into their training regimens due to the disparity that exists between the philosophical roots of counseling and EBPs. In other words, the counseling discipline strongly holds, in high regards, the empirical support of the therapeutic relationship between the counselor and the client (Norcross, 2002) while perpetuating a belief that EBPs traditionally devalue the therapeutic alliance to promote the use of specific interventions for particular problems (Chambless & Ollendick, 2001; Hays et al., 2002). As such, opponents of EBPs often view EBPs as "cookbook" techniques that often overemphasize techniques and underemphasize the relative importance of the therapeutic relationship (Addis & Krasnow, 2000; Lambert & Barley, 2002). However, Norcross (2002) posited that assessing only the "treatment interventions or therapy relationships alone is incomplete" (p. 11). Thus, the incorporation of both entities, the treatment *and* the relationship, are necessary for optimal client outcome.

Despite the growing movement towards the assimilation of EBP in the practice arena, a distinction within the counseling profession has become evident (Messer, 2004). Empirical research supports the efficacy of EBP, and recently a multitude of scholars confirmed that the therapeutic alliance is also a crucial element in counseling success (Klein et al., 2003; Martin, Graske, & Davis, 2000). In essence, the research has polarized the counseling field with boundaries being established by conflicting beliefs and values (Norcross, Beutler, & Levant, 2005). Since neither technique nor the therapeutic alliance can predict 100% of the outcome variance (Chambless & Crits-Christoph, 2005; Norcross, 2002), and because counselors and counselor educators support the therapeutic relationship, an EBP that emphasizes the relationship may disseminate well within the profession (Murray, 2009).

Motivational interviewing (MI; Miller & Rollnick, 2002) may provide counselor educators with an EBP that matches the developmental roots of counselor education. The foundation of MI is based on Carl Rogers' client-centered approach. In fact, Miller and Rollnick defined MI as "a client-centered, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence" (p.25). Additionally, Prochaska and Norcross (2010) included MI within the Rogerian chapter of their theories of psychotherapy textbook because MI places great importance on one's ability to establish an empathic, nonjudgmental therapeutic relationship with the client. Furthermore, MI emphasizes many of the core skills that are valued by the counseling profession (e.g., reflection statements and open-ended questions). In addition to being an approach that parallels counseling principles, MI is also a well-established EBP.

MI emerged as one of the more successful EBPs from the addictions field. During the past two decades, research and interest in utilizing MI with clients that suffer from addictions has

amassed favorable support (Carroll et al., 2006; Dunn, Deroo, & Rivara, 2001). In addition to gaining the support of experts in the field of addictions counseling, given the co-morbidity between addictions and other counseling concerns, current research has also demonstrated the effectiveness of MI in other aspects of the mental health arena (Britt, Blampied, & Hudson, 2003; Rubak, Sandbrek, Lauritzen, & Christensen, 2005). For example, research indicates that MI is effective in promoting physical health (Resnicow et al., 2002), improving the lifestyles of schizophrenics (Rusch & Corrigan, 2002), and aiding in one's ability to control impulsive behaviors (Hodgins, Currie, & el-Guebaly, 2001). Thus, MI offers counselor educators an EBP that not only parallels the foundation of the counseling profession in philosophy and in skills, but research also has shown this approach to be effective for a range of client populations.

Despite the amassed empirical evidence supporting the potency of EBPs, such as MI, the question remains: What are counselor educators' attitudes towards the integration of EBPs in counselor education? This study will discuss the current trend towards the incorporation of EBPs in the helping profession, introduce MI as an EBP that matches the philosophical roots of counselor education, assess counselor educators' attitudes towards the use of EBPs, identify possible barriers towards the inclusion of EBP in the training of student-counselors, and investigate the degree to which counselor educators agree with the guiding principles of MI as being important aspects of the counselor education curricula. The following sections found in this first chapter will address the problem statement, rationale, significance, theoretical framework, purpose and research questions, conceptual framework and measures, assumptions, and definitions for this study.

Problem Statement

Literature suggests that the utilization of EBPs in the clinical field is quickly becoming normal practice, as agencies, state treatment systems, and managed care companies are beginning to mandate the use of EBPs (Chorpita et al., 2002). Regardless, not all clinicians have adopted the use of EBPs. Recent research indicated that clinicians who accept the EBP movement with minimal resistance often come from training programs (e.g., psychology or social work) where the concept of EBP was neither vilified nor ignored (Nelson, 2007).

During the mid to late 1990s, programs accredited by the American Psychological Association (APA) began to train their graduate students in EBPs (Madson, 2005). Slowly, other helping professions incorporated the training of EBPs within their curriculums. However, it seems that EBPs are often not included in counselor education curricula (Whitson & Cocker, 2000). As a result, counselor educators may inadvertently be contributing to professional counselors' resistance towards the use of EBPs in their clinical work.

Rationale for Study

Despite counselors' resistance towards the adoption of EBPs, the counseling profession seems to be inching towards counselors becoming more proficient in implementing EBPs. For example, the latest publication of the ACA *Code of Ethics* (2005) spoke to the ethical responsibility of counselors becoming trained in and utilizing EBPs when working with clients (Standard C.6.e). Furthermore, the revised standards for the Council for Accreditation of Counseling and Related Educational Programs (CACREP) emphasized the importance of training student-counselors in EBPs (CACREP, 2008). Specifically, the core curriculum areas of

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the 2009 CACREP standards suggested that all student-counselors be exposed to EBPs during their training (Section II, G. 8), while explicitly stating that student-counselors enrolled in the more clinically focused tracks (i.e. addiction counseling [I. 3], clinical mental health counseling [I. 3] and marriage, couple, and family counseling [I. 3]) possess a thorough understanding of EBPs in order to properly assess potential counseling outcomes. Thus, it seems that the guiding organizations of counseling have recognized the helping profession's movement towards the use of EBPs.

Although ACA and CACREP emphasize the ethical responsibility to include EBPs in counselor education programs, these guidelines do not solely ensure the incorporation of such training at a systemic level. Currently, counselor education literature lacks empirical research concerning counselor educators' intent to teach empirically supported brief interventions (Sexton, 2000; Wester, 2007). As such, it can be construed that students who choose to enter counselor education programs are not exposed to the most current and efficient treatment modalities (Sheperis et al., 2009). Without assessing counselor educators' willingness and attitudes of teaching such approaches, and without a way to disseminate this information to the public, counselor education potentially provides a disservice to society by not fully preparing student-counselors.

In addition to assessing the attitudes and perceived barriers towards the inclusion of EBPs in counselor education curricula, this study will investigate counselor educators' agreement towards MI principles. Research suggests that when individuals hold a strong affinity towards at least one EBP, they are more likely to possess favorable views towards researching other EBPs for their clinical work (McFarlane, McNary, Dixon, Hornby, & Cimett, 2001). Literature also

indicates that a fundamental philosophical difference exists between the counseling profession and EBPs, which may prevent counselor educators from fully recognizing the importance of training student-counselors in EBPs (Chambless & Ollendick, 2001; Hayes et al., 2002). However, MI offers counselor educators an EBP that closely resembles the humanistic and developmental perspective held by the profession of counselor education. As such, the need to promote EBP in counselor education, coupled with the MI's compatibility with the philosophical roots of counselor education, warrants a study that aims to highlight whether MI can be the catalyst to promoting the consistent incorporation of EBPs in counselor education curriculum.

In terms of practical merit, this entire study will denote an initial line of research to begin assessing counselor educators' attitude towards teaching EBPs. Furthermore, this study may also contribute an important step towards investigating counselor educations' agreement with the 2009 CACREP standards that specifically call for training student-counselors in EBPs. Thus, a study such as this could either underscore the prominence of counselor education among the various helping professions or demonstrate the need for counselor education to reevaluate the training procedures of student-counselors in order to maintain the competitiveness of the counseling profession among the other helping professions.

Significance of Study

Although the overall rationale for this study is to investigate counselor educators' attitudes towards the adoption of EBPs in counselor education curriculum, this study will address several specific aspects of counselor education programs. First, the study will begin by measuring counselor educators' attitudes towards the EBP movement, so as to recognize the

competitiveness of counselor education among the other professions that train helpers. Second, it will assess counselor educators' perceived barriers of including EBPs in counselor education curricula. Finally, this study will investigate whether counselor educators agree with the guiding principles of MI in order to begin assessing the potential of MI being compatible with the current counselor education curricula. Thus, this study will not only contribute to the counselor education literature by denoting the first evaluation of EBP incorporation in counselor education curricula, it will also provide an initial step to assess whether training counselor educators in MI could promote the overall EBP movement in counselor education.

Theoretical Framework

Adoption and diffusion of EBPs represents the core foundation of this study. McGuire (2006) suggested that *adoption* begins when an individual acquires new knowledge, forms an "accept or reject" attitude about the new information, and then decides whether to accommodate and implement the new information; whereas *diffusion* implies widespread acceptance and integration of a practice at the organizational level (p. 53). As such, the postulated component model of Rogers' (2003) diffusion of innovation theory will be used as the theoretical framework of this study. To date, it appears that diffusion of innovation theory represents a framework that has successfully been applied to address the adoption of EBPs in a variety of academic settings, such as nursing education (Milner, Estabrooks, & Myrick, 2005), information systems (Wainwright & Waring, 2007), and public health (Moseley, 2004). Thus, this theory will be used to examine the process of incorporating EBPs in counselor education.

Diffusion of innovation theory illustrates a process in which new ideas, practices, or innovations are spread into a social system (Rogers, 2003). More specifically, diffusion of innovation theory explains a process whereby the end results of diffusion include adoption, implementation, and institutionalization of a particular practice (Murray, 2009). Funk, Champagne, Wiese, and Tornquist (1991) explained diffusion as a process through which (1) an innovation (the idea, practice, or object that is new to the potential adopter) (2) is communicated through certain channels (the means by which one individual shares an innovation with another) (3) over time (the time it takes an individual to move from first knowledge of an innovation to its adoption or rejection) (4) among the members of a social system (the set of interrelated units that are engaged in joint problem solving to accomplish a common goal) (p. 39). Therefore, both individual and organizational factors contribute to the adoption and diffusion of an innovation.

As cited by Aarons (2004), researchers have demonstrated the impact of both individual and organizational factors on professional helpers' attitudes towards EBPs. For example, individual factors, such as professional experience and training, and organizational factors, such as program type and presence of written policy, often affect the rate of EBP diffusion and adoption in the helping profession (Aarons, 2004; Gotham, 2006). Thus, Murray (2009) claimed that investigating the effect of both individual and organizational factors on the diffusion of innovations could potentially be useful in assessing the severity of the research-practice gap in the counseling profession.

Conceptual Framework and Measures

This study will investigate counselor educators' attitudes and perceived barriers to the inclusion of EBPs in counselor education curricula as a means to the overall understanding of the research-practice gap in the counseling profession. In order to assess counselor educators' willingness to teach EBPs in their classes, Ajzen's (1991) Theory of Planned Behavior will guide this study. This theory was developed for the primary purpose of predicting behaviors (Greenidge, 2007) and surmised that the best predictors of an individual engaging in a specific behavior are dependent upon his/her attitudes, subjective norms, and perceived behavioral control (Ajzen, 2002); where *subjective norms* refers to the perceptions of how others value the behavior and *perceived behavioral control* refers to the ability to overcome potential obstacles (Ajzen, 1991). As such, behavior, when it is not under volitional control, "is most effectively predicted given knowledge of attitudes, subjective norms, and subjective beliefs about control over potential obstacles to achieving particular behavioral goals" (Mackenzie, Knox, Gekoski, & Macaulay, 2004, p. 2411).

In adapting Ajzen's theory to this study, three factors would influence counselor educators' willingness to include EBP in counselor education curriculum: (1) his/her attitude towards EBPs, (2) his/her subjective norms regarding the teaching of EBPs, and (3) his/her self-perceived control of barriers to teaching EBPs. As such, the researcher will utilize: (a) the Evidence-Based Practice Attitude Scale (EBPAS; Aarons, 2004) to assess counselor educators' attitudes towards EBPs; and (b) the BARRIERS Scale (Funk et al., 1991) to measure counselor educators' subjective norms and perceived barriers to teaching EBPs in counselor education curricula. In addition to these instruments, this study will institute researcher-developed items to

assess counselor educators' level of agreement towards MI's guiding principles as being important to the counseling process. Both the EBPAS and the BARRIERS Scale have been established as valid and reliable instruments. The additional, researcher-developed items were reviewed for item objectivity and item clarity. In addition to these instruments, a demographic questionnaire will be included in the study. These instruments and their psychometric properties are thoroughly discussed in Chapter 3.

Purpose of Study and Research Questions

The overall purpose of this study is to investigate counselor educators' attitudes towards EBPs and perceived barriers to teaching EBP in counselor education curricula. Furthermore, this study will assess counselor educators' accord towards the basic tenets of MI. Accordingly, the following research questions were investigated in the study:

1) Do counselor educators' attitudes towards evidence-based practices differ by individual factors?

   Hypothesis 1a: Counselor educators with formal training in evidence-based practices will score higher on the *Evidence-Based Practice Attitude Scale* when compared to counselor educators with no formal training in evidence-based practices.

   Hypothesis 1b: Counselor educators with less than 10 years of professoriate experience in academia will score higher on the *Evidence-Based Practice Attitude Scale* when compared to counselor educators with 10 or more years of professoriate experience in academia.

Hypothesis 1c: Counselor educators with a clinically focused professional identity

will score higher on the *Evidence-Based Practice Attitude Scale*,

when compared to counselor educators with a vocationally focused

professional identity.

2) Do perceived barriers towards the inclusion of evidence-based practices in counselor

education curricula differ by organizational factors?

Hypothesis 2a: Counselor educators who teach at doctorate granting programs will

score lower on the *BARRIERS Scale* when compared to counselor

educators who teach at masters only programs.

Hypothesis 2b: Counselor educators who teach at CACREP accredited programs will

score lower on the *BARRIERS Scale* when compared to counselor

educators who teach at non-CACREP accredited programs.

Hypothesis 2c: Counselor educators who are employed as core faculty members will

score lower on the *BARRIERS Scale* when compared to counselor

educators who are employed as noncore faculty members.

3) Do counselor educators' attitudes towards evidence-based practices influence the

extent to which situations are perceived as barriers with regards to the inclusion of

evidence-based practices in counselor education curricula?

Hypothesis: A negative correlation will exist between counselor educators' attitudes

towards EBPs, as measured by the *Evidence-Based Practice Attitude Scale*, and their

perceived barriers towards the inclusion of EBPs in counselor education curricula, as

measured by the *BARRIERS Scale*.

4) Do counselor educators' reported levels of agreement to motivational interviewing's presence in the counseling relationship influence their attitudes towards evidence-based practices?

   Hypothesis: A positive correlation will exist between counselor educators' reported levels of agreement towards the inclusion of motivational interviewing principles in the counseling relationship and their attitude towards evidence-based practices, as measured by the *Evidence-Based Practice Attitude Scale*.

Assumptions

Prior to conducting this study, this researcher will consider several assumptions from existing literature that pertain to the focus of this project. The first assumption concerns the notion that counselor educators have an ethical responsibility to include EBPs in counselor education curriculum. In fact, both ACA (2005) and CACREP (2008) emphasized that all student-counselors be exposed to EBPs during their training. The second assumption concerns the lack of EBP exposure in counselor education due to philosophical differences between counselor education and EBPs (Sexton, 2000). The final assumption concerns the relevancy of MI as an EBP (Wormer, 2007). A vast amount of empirical research supports the use of MI with a variety of populations; thus, MI could be taught as an EBP in counselor education because it matches the philosophical roots of the counseling profession.

Definitions

Before investigating the issues of this research project, it is imperative to clarify several definitions. Therefore, the following terms are defined as they apply to this study.

Association for Counselor Education and Supervision (ACES): A professional organization for counselor educators.

Council for Accreditation of Counseling and Related Educational Programs (CACREP): The accrediting body of counselor education programs (master's and doctorate).

Clinically-Focused Programs: Those counseling programs that promote the adherence to clinical practice and research (i.e. addictions counseling, clinical mental health counseling, and marriage, couple, and, family counseling).

Core Faculty: Faculty members whose full-time academic appointments are in counselor education (e.g., full professor, associate professor, assistant professor).

Counselor Education: A training program that is housed within an educational institution and designed to prepare professional counselors through a regimen of curricular and clinical experiences.

Counselor Educator: A faculty member who provides curricular and clinical experiences for students in counselor education programs.

Evidence-Based Practice (EBP): Counseling strategies that have demonstrated efficacy in treating specific psychological issues within randomized clinical trials.

Formal EBP Training: The type of training received (e.g., graduate course, conference, workshop, continuing education) where the focus was central to the utilization of an EBP with a specific population.

Individual Factors: Factors that may directly or indirectly affect attitudes towards EBPs (e.g., training and experience).

Motivational Interviewing: A directive, client-centered approach for eliciting behavior change by assisting clients in exploring and resolving ambivalence.

Noncore Faculty: Faculty members who do not possess full-time academic appointments in counselor education (e.g., visiting instructor, adjunct, lecturer).

Organizational Factors: Factors that may facilitate or hinder the implementation of EBPs in an organization (e.g., accreditation status and type of program).

Professional Counselor: A licensed or licensed-eligible counselor who provides therapeutic services to clients.

Professional Identity: The clinical identity that a professional counselor identifies with most (e.g., mental health counselor, professional school counselor, marriage and family therapist, etc.).

Student-Counselor: A student in a counselor education program who is preparing to become a professional counselor.

Vocationally-Focused Programs: Those counseling programs that promote the academic and career development of individuals (i.e. career counseling, school counseling, and student affairs and college counseling).

Summary

Howard, McMillen, and Pollio (2003) suggested that the pedagogical use of EBPs teach student-counselors the values and skills needed to support their growth as professional

counselors. Whereas certain graduate programs in the helping professions (i.e. psychiatry, psychology, and social work) have already incorporated the teaching of EBPs into their classrooms (Chwalisz, 2000; Shernoff et al., 2003; Woody et al., 2006), paucity exists within the counselor education literature concerning this trend, despite the recent guidelines established by ACA (2005) and CACREP (2008).

Several studies have recognized counselor educators' hesitancy towards the incorporation of EBPs in counselor education curricula. One major roadblock seems to be the attitudes that many counselor educators possess towards the use of EBPs (Sexton, 2000). Traditionally, EBPs are viewed as interventions that remove the essence of the therapeutic relationship from the counseling process (Norcross, Hogan, & Koocher, 2008). However, MI offers counselor educators an EBP that emphasizes therapeutic alliance as it was founded on the person-centered approach (Miller & Rollnick, 2002). Thus, MI could possibly emerge as the bridge between EBP and counselor education.

Despite the ethical responsibility of teaching student-counselors in EBPs, counselor educators typically perceive that EBP reduces counseling to the medical model (Wampold, Ahn, & Coleman, 2001). However, MI offers counselor educators an effective and efficient EBP, which matches the philosophical roots of counselor education. The overall intention of this study is to investigate counselor educators' attitudes towards the adoption of EBP in counselor education curricula, and to begin discerning the prospect of teaching MI as an EBP in counselor education curricula. The next chapter will strengthen the case for this study by reviewing the recent literature that alludes to the importance for teaching EBPs, specifically MI, in counselor education programs.

CHAPTER TWO: REVIEW OF LITERATURE

This chapter will explore literature pertaining to the topics of the current study. Specifically, this chapter will provide the historical aspects of evidence-based practices, discuss the role of evidence-based practice in the mental health arena, explain the theoretical tenets of motivational interviewing, and review empirical studies that assess the efficacy of utilizing motivational interviewing in the field and in the classroom. The overall purpose of this literature review is to emphasize the need to assess counselor educators' attitudes toward the inclusion of evidence-based practices in the counselor education curriculum.

Evidence-Based Practices in the Helping Profession

A current trend in psychotherapy is the incorporation of evidence-based practices (EBPs), specifically due to the influence of managed healthcare (Madson, 2005). Initially, the concept of EBP evolved from evidence-based medicine (EBM; Reynolds, 2000). EBM was an attempt to provide busy medical professionals with a scientific, yet appealing, method to identify and incorporate effective treatment approaches for their medical practices (Oxman et al., 1993). Sackett, Richardson, Rosenberg, and Haynes (1997) conceptualized EBM as "…the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients, based on skills which allow the doctor to evaluate both personal experience and external evidence in a systematic and objective manner" (p.71). In response to the innovation of an approach that assessed empirical research for treatment implementation and efficacy, many non-psychotherapeutic healthcare professions began utilizing EBM as the predominant model for the training of their students (DiLillo & McChargue, 2007).

EBM eventually broke into the psychotherapeutic realm and spawned the empirically supported treatment (EST) movement (Reynolds, 2000). EST refers to specific interventions, which have demonstrated efficacy for treating specific afflictions through numerous, randomized trials (Waehler, Kalodner, Wampold, & Lichtenberg, 2000). ESTs not only assisted the mental health profession to address the need for implementing researched based interventions, but ESTs were a catalyst to practitioner accountability (Hayes, Barlow, & Nelson-Gray, 1999).

In the medical field, practitioner accountability was established through treatment standardization. In other words, medical trails involved administering the same medication at the same dose, or following a specific protocol when administering the treatment (Norcross et al., 2005). Abiding by this format ensured the efficacy of a specific treatment on certain symptoms. In the mental health arena, treatment manuals were found to best standardize psychotherapeutic interventions.

In 1993, the APA established the Task Force on Promotion and Dissemination of Psychological Procedures in response for the required justification of therapeutic interventions (Madson, 2005). The goal of this Task Force was to identify well-established and efficacious interventions for the purposes of training graduate students (Chambless et al., 1998). However, the Task Force was met with much opposition from a number of clinicians claiming that ESTs did not address the issues that were relevant to psychotherapy, such as clinician flexibility and therapeutic relationship (Garfield, 1996).

In response to the EST controversy, the APA introduced and endorsed the concept of *evidence-based practice* (EBP; APA, 2005b). EBP was defined as "the integration of best available research with clinical expertise in the context EBP represented a more comprehensive

approach when compared to EST, as EBP encompassed more than just interventions (Woody et al., 2006). APA (2005a) contended that EBPs represented "the integration of best available research with clinical expertise in the context of patient characteristics, culture, and preferences" (p. 1). In other words, clinicians who utilized EBPs took into account the dynamics of the therapeutic relationship and client variables prior to implementing a specific approach (APA, 2005b). Thus, the EBP movement encompassed a broader range of counseling skills, not just interventions (i.e. assessing client values and characteristics to determine the best course of action).

As a result of APA endorsing the EBP movement, a number of organizations developed lists to identify psychotherapeutic practices with empirical support (Chambless & Hollon, 1998; Task Force on Promotion and Dissemination of Psychological Procedures, 1995). For example publications such as *Practice Guidelines for the Treatment of Psychiatric Disorders* (American Psychiatric Association, 2006) and *A Guide to Treatments that Work* (Nathan & Gorman, 2007) have identified EBPs for various psychological issues among children, adolescents, and older adults (Norcross et al. 2005). The intention of these publications was to balance scientific research with the various aspects of the helping profession, as opposed to just providing clinicians with manualized treatments (American Psychiatric Association).

The balance between research and the uniqueness of the counseling process (e.g., client values) makes the use of EBPs much more appealing to the counseling profession. For example, Crane and Hafen (2002) noted that EBPs will provide counselors the necessary empirical support to meet the needs of managed healthcare without compromising the various dynamics of the

therapeutic relationship. Thus, professional counselors can retain their unique identities in the psychotherapeutic realm during the age of managed healthcare.

Managed healthcare in combination with the APA's support of EBPs helped to spark the rise in numbers of practitioners, agencies, and state treatment systems that mandate the utilization of EBPs (Chorpita et al., 2002; Hogan, Roth, Svedson, & Rubin, 2002). However, Gotham (2006) pointed out that the decision to mandate EBPs in not the equivalent to its implementation. Individual and organizational factors, such as attitude and perceived barriers to EBPs, play a pivotal role in the dissemination of a new innovation (Rogers, 1995). As such, Gotham stressed that graduate training programs "must take the lead in providing EBP instruction if we are to have a competent workforce of professionals who can implement EBPs in practice" (p. 611). The following sections will demonstrate the support for the EBP-focused research questions of this study.

Factors that Influence the Dissemination of Evidence-Based Practices

After the APA's endorsement of EBPs, the helping profession began to experience a paradigm shift (Nelson, 2007). Subsequently, Aarons (2004) conducted a groundbreaking study where he investigated practitioner attitudes towards EBPs. Surveying 322 clinicians in the public sector, Aarons identified several variables that influenced attitudes towards EBPs. Results indicated that attitudes towards the adoption of EBPs were influenced by provider education, provider experience, and organizational context. Specifically, Aarons recognized that respondents with higher educational status were more likely to have favorable attitudes towards the adoption of EBPs, while greater clinical experience was associated with less favorable

attitudes. Upon further analysis of this study, Aarons and Sawitzsky (2006) suggested that the consideration of practitioners' attitudes toward the adoption of innovations in relation to organizational context could facilitate the implementation of EBPs. Consequently, Stahmer and Aarons (2009) posited that assessing characteristics of potential adaptors could promote effective dissemination and implementation of EBPs. Thus, the current study investigated the influence of individual and organizational factors on counselor educators' attitudes towards EBPs in accordance with the existing research.

EBP Training

As the EBP movement began to meet acceptance among novice professional helpers, educators in the fields of psychiatry, psychology, and social work began teaching and training their students in EBPs (DiLillo & McChargue, 2007; Howard, Allen-Mears, & Ruffolo, 2007; Woody et al., 2006). Straus and Sackett (1999) recognized that neither evidence nor clinical experience alone was sufficient in providing the best educational experiences for students. In fact, a proactive approach of incorporating both experience and research at the training level resulted in the establishment and continued maintenance of EBP knowledge and skills (Corrigan & McCraken, 1998; Corrigan, Steiner, McCraken, Blaser, & Barr, 2001).

Literature indicates that students trained in EBP during their formal education establish and maintain fidelity towards EBPs, as opposed to other practitioners that either did not receive training or received post-graduate training in EBPs (Hoge, Tondora, & Stuart, 2003). In a study conducted by Sabus (2007), where the effect of EBP inclusion in physical therapy curriculum was assessed, it was posited that clinical education posed a potential gap for clinicians to not

struggle in the EBP framework. Sabus found that students, who received EBP training in their physical therapy curricula, were much more competent in EBPs four months after graduation, when compared to students not trained in EBPs. Additionally, Sabus discovered that students were more likely to attribute their EBP competence towards clinical instruction as opposed to research.

In another study that investigated the effect of EBP training within the curricula, Prochaska and colleagues (2008) suggested that a gap existed in the amount of smoking-cessation training that psychiatrists received during their formal educational experiences, despite the high risk of smoking related deaths among smokers with mental illness. To address this issue, the authors investigated the effectiveness of the inclusion of a smoking-cessation EBP in psychiatry curricula. Participants included 55 psychiatry residents at three universities in California. Utilizing a pre-post test, the authors investigated the effectiveness of training on the participants' knowledge, attitudes, confidence, and behaviors of implementing the EBP. The authors found that the inclusion of the EBP in the psychiatry curricula yielded significant gains in students' knowledge, attitudes, confidence, and behaviors of implementing EBP immediately after training and at a three-month follow-up interval.

Expanding on EBP-training research, Ahmadi-Abhari, Soltani, and Hosseinpanah (2008) investigated student-physician knowledge and attitudes towards EBP, and concluded that both knowledge and attitude were associated with previous research experience and prior EBP training. Interestingly through, the authors found that the knowledge scores were not impressive, even if attitudes toward EBP were positive. It was inferred that without planned EBP training, such as a conventional curriculum, student-physicians would not acquire the basic EBP skills

because students will not value EBP "if they do not see it put into practice by the faculty" (p.779).

In terms of faculty impact, Howard and colleagues (2003) asserted that when educators were knowledgeable about EBPs, they possessed a broad awareness of scientifically researched interventions, and consequently, produced effective and competent helpers. Accordingly, McFarlane and colleagues (2001) indicated that a lack of knowledge and skills in EBPs impeded the dissemination of this approach. Since both training and faculty have such an influential role in the professional development of students, it would be of interest to investigate whether counselor educators' attitudes towards EBP differ by their own level of EBP training.

Experience in the Profession.

Due to the lack of EBPs being implemented among professional counselors, Whiston and Coker (2000) conducted an analysis on the teachings of research-based knowledge in counselor education. Results indicated that counselor educators were teaching interventions and constructs that were not based on EBPs: rather, the majority of counselor educators were teaching from the Core Conditions Model (Patterson, 1984) in which empathy, unconditional positive regard, congruence, and genuineness represent the main training foci. Although research indicates that empathy significantly contributes to client change, the other conditions account for little gains in client outcomes (Gelso & Hayes, 1998; Norcross, 2002). Subsequently, it can be assumed that student-counselors receive little exposure to empirically supported interventions that most effectively bring about client change. Thus, Whiston and Cocker concluded that seasoned educators tend to use antiquated models to train student-counselors, which inadvertently

contributes to the documented gap between research and the practice of EBPs among professional counselors.

Among the list of common factors that predict the adoption of EBPs in the helping profession, years of experience in the profession was one noted by many (Aarons 2004; Addis & Krasnow, 2000; McGuire, 2006; Nelson, 2007). For example, Stahmer and Aarons (2009) posited that clinicians who held positive attitudes towards innovations would promote effective dissemination and implementation of the most efficacious and effective interventions. Therefore, they investigated the effect of individual factors, such as educational attainment and clinical experience, on the adoption of EBPs among 309 helping professionals who provided mental health services to children. One result from their study showed that years of experience were negatively associated with willingness to adopt EBPs, indicating that younger clinicians were more open to adopting EBPs.

In another study regarding the impact of the experience on EBP adoption, Aarons and Sawitzky (2006) investigated the difference in attitude towards EBPs among mental health interns and experienced clinicians. Specifically, Aarons and Sawitzsky surveyed 301 mental health providers in 49 different programs. They reported that interns held the most positive attitudes towards the adoption of EBP when compared with experienced clinicians. Additionally, the authors found a significant negative correlation between job tenure and willingness to adopt EBPs. This suggests that individuals who are newer to their profession are more open to adopting EBPs.

In terms of faculty experience, Beasley and Woolley (2002) assessed the attitudes of various faculty members in medical schools. With regards to individual factors, the authors

found that having a more extensive research background was positively correlated with positive attitudes towards EBP, whereas the number of years since residency correlated negatively with EBP attitudes. Additionally, those further removed from their residency were less likely to incorporate EBP in their teachings. Similarly, Weissman and Sanderson (2002) investigated the amount of inclusion of EBPs in graduate training programs in helping professions. The authors found that clinicians who were formally trained ten or more years prior to the study were unlikely to be familiar with EBPs, indicating that more experienced faculty would be less likely to disseminate EBPs in their teachings. Due to the inverse effect of experience in previous research, it is of interest in the current study to investigate the effect of experience in academia on counselor educators' willingness to adopt EBPs into the counselor education curricula.

Area of Focus

A long-standing topic of discussion within the counseling profession relates to counseling's professional identity, as perceived by the general public among the other helping professions (e.g., psychology and social work). Hanna and Bemak (1997) pointed out that the counseling profession continuously strives to evolve and differentiate itself from the various fields of the helping profession, but that this endeavor proves to be difficult on multiple levels because the term *counseling* is not limited to the counseling profession. In fact, in a recent discussion post, Halvorson (2010) lamented that the term *counselor* has come to identify a variety of individuals, regardless of degree attainment (i.e. Ph.D., masters, etc.) or type of degree (i.e. mental health counselor, psychologist, attorney, etc.). As such, the public may recognize counseling as a general term, as opposed to a specific profession.

Adding to the confusion brought about by the general public's projection of the counseling profession, there seems to be vast differences among areas of foci within the counseling profession. American Counseling Association's (ACA) acceptance of a diverse counseling profession has yielded in the counselor education profession housing multiple degree programs (e.g., clinical mental health and school counseling; Calley & Hawley, 2008). In response to ACA's endorsement of the various areas of the counseling profession, the Council for Accreditation of Counseling and Related Educational Programs (CACREP) developed standards to bring about a sense of professional identity and uniqueness within the counseling profession (Goodyear, 2000). The current CACREP (2008) standards recognize six areas of foci in the counseling profession: (a) Addiction Counseling; (b) Career Counseling; (c) Clinical Mental Health Counseling; (d) Marriage, Couple, and Family Counseling; (e) School Counseling; and (f) Student Affairs and College Counseling. Although these areas are collectively recognized as degree programs of counseling, each area also identifies itself as a distinct profession, with its own professional association(s). As a result, national standards for education, training, and practice differ among these degree programs (Calley & Halley, 2008).

In spite of CACREP's goal of unifying the counseling profession, the standards continue to delineate among those programs with a more vocational focus from those with a more clinical emphasis. One distinction made by CACREP is in the number of required credit hours. Whereas the vocational degree programs of Career Counseling, School Counseling, and Student Affairs and College Counseling require students to complete "a minimum of 48 semester credit hours or 72 quarter credit hours" (CACREP, 2008, Section I, I, p. 3), CACREP requires students in the clinical degree programs of Addiction Counseling, Clinical Mental Health Counseling, and

Marriage, Couple, and Family Counseling to complete " a minimum of 60 semester credit hours or 90 quarter credit hours" (CACREP, 2008, Section I, I, p. 3).

According to R. I. Urofsky (personal communication, April 5, 2010), CACREP originally developed the distinction in credit hours to offer students two options. However, as the ACA became more established, states began passing licensure laws in accordance with the two options. For example, over half the states in U.S. currently require individuals to obtain at least 60 credit hours of counseling education for clinical licenses, while maintaining that individuals being certified or licensed in vocational areas obtain a minimum of 48 credit hours. Gale and Austin (2003) suggested that this distinction may be made on the basis that the clinical degree programs train students to work with clients with mental disorders or with families (Gale & Austin, 2003), whereas vocational programs train students to promote the academic, career, and social development of clients.

To further support the notion that differences exists between clinical and vocational counselors, Stahmer and Aarons (2009) conducted a study to investigate the differences in attitudes towards the adoption of EBPs among helping professionals who work with clients presenting with autistic spectrum disorders. Specifically, the authors focused on assessing the differences between early intervention providers (helping professionals who were trained with a vocational focus) and mental health providers (helping professional who were trained with a clinical focus). It was concluded that early intervention providers were much more open towards adopting EBPs when compared to mental health providers, and posited that many mental health providers, due to their formal training, were more ingrained in their current practice and less likely to adopt new practices. Furthermore, Stahmer and Aarons suggested that perhaps

professional helpers originally trained in education (e.g., school counselors) were more open to innovation. This study, in addition to the differences in required training as asserted by CACREP (2008) among the different counseling tracks, posits that a difference may exist among counselor educators depending on their area of specialty. Thus, the current study investigated the difference among counselor educators with a clinical background (i.e. Addiction Counseling, Clinical Mental Health Counseling, and Marriage, Couple, and Family Counseling), as opposed to counselor educators with a vocationally-based background (i.e. Career Counseling, School Counseling, and Student Affairs and College Counseling), in terms of their attitudes towards EBPs.

Program-Type

Rogers (2003) posited that the adoption of innovations was not only based on individual factors (e.g., training and experience; Stahmer & Aarons, 2009), but it was also based on organizational factors (e.g., departmental decisions and professional peer organizations; Gotham 2006). Thus, individuals' perceptions of, and emotional responses to, the characteristics of their work environment and how others behave in an organization can strongly influence the adoption of innovative approaches (Aarons & Sawitzky, 2006).

In terms of work environment, Addis and Kransnow (2000) found that faculty reported more positive attitudes towards treatment manuals and EBPs than did clinicians in the private sector. The authors surmised that attitudes towards innovations might largely be formed by discussions with colleagues as opposed to direct experience. In other words, organizational factors may influence faculty's decision to incorporate EBPs in their curricula.

In an effort to investigate faculty characteristics and attitudes as it relates to EBPs, Woody et al. (2006) aimed to assess the climate of EBP-inclusion in social work education programs. The authors found that faculty commitment to teaching EBPs was strongly and positively associated with program commitment to teach EBPs. The authors also found that faculty who taught research-based courses (e.g., foundations of research and research methodology courses) were more willing to teach EBPs as compared to faculty who taught human behavior courses. Accordingly, the study revealed that doctoral-granting programs were more committed to including EBPs in the curriculum when compared to master's only programs. The difference may be attributed to the possibility that doctoral-granting programs are driven by research more so than master's only programs (APA Committee on Accreditation, 2002). Therefore, it would be of interest to the current study to investigate differences in organizational factors between doctoral-granting programs and master's only programs in counselor education.

Accreditation

It can be construed that the formation of professional identity in counseling takes place during graduate school, and that identity, in turn, has an influence on the future decisions (e.g., treatment planning) that would affect the client (Brott & Myers, 1999). Calhoun, Moras, Pilkonis, and Rehm (1998) posited that learning EBPs in the classroom could assist novice helpers in establishing a counseling theory and developing the skills necessary to facilitate a therapeutic working alliance. Thus, course content plays a formative role towards to the exposure of EBPs.

Due to the laissez faire approach to course content in higher education, accreditation seems to be the standardizing factor (Gale & Austin, 2003). In fact, Milsom and Akos (2005) indicated that accreditation "…guides decisions about course content," (p. 148). Additionally, accreditation is often pursued and valued by institutions of higher education due to the effect that accreditation has on the quality of education (Sweeney, 1992). Subsequently, the counseling profession established an accrediting institution for its training programs in 1981 (Hollins, 1998): the Council for Accreditation of Counseling and Related Educational Programs (CACREP) was established to develop standards for counselor training (Bobby & Kandor, 1992). Although the CACREP standards do not mandate programs in what, or how, courses should be taught, the standards do promote student achievement in counselor education (Stevens-Smith, Hinkle, & Stahman, 1993). For example, Scott (2000) designed a study to investigate the effect of CACREP accredited programs on the development of student-counselors' clinical skills and knowledge. The author analyzed the mean National Counselor Examination (NCE) scores of 9,707 students in CACREP and non-CACREP accredited programs. NCE scores were obtained across six years and indicated that CACREP accredited programs produced students whose scores were statistically superior to students from non-CACREP accredited programs.

In addition to promoting student development, CACREP accreditation seems to have a direct effect on counselor education faculty. For instance, Gordon, McClure, Petrowski, and Willroth (1994) assessed the influence of CACREP accreditation on scholarly production among counselor education faculty in 78 counselor education programs. The authors found that research productivity significantly increased after the programs received CACREP accreditation. In fact, Hoge, Tondora, and Stuart (2003) indicated that accreditation requirements seem to promote

change much more quickly when compared to institutions left to their own accord. Due to counselor educators' pivotal role in the emergence of counseling professionals (Calley & Halley, 2008), the current study will investigate the differences in perceived organizational factors of faculty in CACREP accredited programs and non-CACREP accredited programs as they relate to perceived barriers to the inclusion of EBPs in counselor education curricula.

Faculty Position

The number of training programs that include EBPs in the curricula increased during the past ten years (Woody, Weisz, & McLean, 2005). In fact, Moras (1993) explained that the inclusion of EBPs in helping profession curricula could result in: (a) the conceptual understanding of psychopathology, (b) the learning of specific interventions that promote therapeutic change, (c) the development of skills that help establish therapeutic alliance, (d) the awareness of potential drawbacks from implementing specific interventions, and (e) the ability to evaluate client outcomes. In conjunction with this rise, research focusing on organizational factors at the program level followed.

One of the organizational factors that warrants attention is the difference in EBP-attitudes between core faculty and noncore faculty. Beasley and Woolley (2002) investigated the differences in attitudes towards EBPs between core and noncore faculty in medicine. The authors obtained responses from 22 core faculty and 177 noncore faculty and found that core faculty held significantly more positive attitudes towards EBPs than did noncore faculty. It was concluded that due to their identity as practitioners (as opposed to instructors), the noncore faculty in this study were not as equipped, and thus perceived more barriers to the inclusion of EBPs in their

teaching when compared to core faculty. This suggests that core faculty view less barriers to the inclusion of EBPs in training curricula.

In another study, which focused social work education, Rubin and Parrish (2007) assessed the receptivity towards EBPs among 973 faculty members in social work graduate programs. Among their findings, the authors reported that 88% of the core faculty in their study viewed the EBP movement favorably. Furthermore, the authors indicated that noncore faculty might hold less favorable views regarding EBPs because they might have less information pertaining to EBPs. Therefore, the contention could be made that noncore faculty may report greater barriers to the inclusion of EBP-training in their curricula.

Aarons (2005) contended that culture and climate of a work-place environment can affect attitudes towards the adoption of an innovation. Thus, innovations more readily integrate into an organization when the individuals in the organization are open to adopting the innovation and when the innovation is relevant to the individual (Lehman, Greener, & Simpson, 2002). Since it seems that the culture and climate of core faculty are more positive towards EBPs, it would be of interest to the current study to determine if there are differences in perceived barriers to the inclusion of EBPs in counselor education curricula among core and noncore faculty in counselor education.

As discussed to this point, a number of studies indicate the relevance of EBPs in training programs within the helping profession. Specifically, the aforementioned sections highlighted both individual and organizational factors that were found, in previous studies, to be influential in the diffusion and adoption of EBPs across various areas of the helping profession. However, it

should be noted that the most of the literature reviewed in the previous sections were pulled from journals outside of the counseling profession.

The lack of EBP literature in counseling journals supports Sexton's (2000) position that that the counseling profession resists the EBP movement. Rubin and Parrish (2007) indicated that opponents tend to object EBPs because "(a) it denigrates clinical expertise, (b) it ignores patients' values and preferences, (c) it promotes a 'cookbook' approach to practice, (d) it is merely a cost-cutting tool, and (e) it leads to therapeutic nihilism" (p. 112). However, research shows that innovations which match the mission of the organization are much more likely to be adopted over time when compared to innovations that are adopted as a fad (Lehman, Greener, & Simpson, 2002). In other words, an EBP that matches the developmental philosophy of the counseling profession has greater potential to be adopted across the profession as opposed to EBPs that are counter to the counseling philosophy. The following section will discuss an EBP that has the potential to match the counselor education philosophy.

Motivational Interviewing as an Evidence-Based Practice

Sexton (2000) contended that counselor educators, despite their overall goal of fostering clinical skills that promote client change, stray away from EBPs because they may not philosophically match the developmental roots of counseling. In maintaining an unfavorable attitude towards EBPs, student-counselors seem to be endorsing similar beliefs (Kimhan, 2007). This could become disadvantageous for the discipline of counselor education, as the trend towards the use of EBPs continues to grow in the other professional helping fields. As such,

counselor education may benefit from incorporating an EBP into the curriculum that boasts a developmental philosophy.

One such EBP that aligns well with the values held by the counseling profession, and one that has evidenced success at promoting clients' change processes is motivational interviewing (MI; Miller & Rollnick, 2002). Miller and Rollnick (2002) described MI as a directive, client-centered approach that elicits behavior change by helping clients work through their ambivalence to change. As an EBP, MI has gained wide-spread acceptance among many researchers in the counseling arena. Additionally, Miller (2007) posited that teaching the principles of MI has the potential to enhance the training of student-counselors in general. MI relies on the understanding of two key concepts: (a) that a client's level of readiness to change rests along a continuum, and (b) that ambivalence and resistance to change are normal aspects of the change process (Madson, 2005). Prior to reviewing literature that supports MI's use as an EBP, the following sections will discuss the abovementioned concepts in greater detail in order support the notion that MI matches the developmental foundation of the counseling profession.

Readiness to Change

The first concept of MI concerns the stages of change introduced by Prochaska and DiClemente's (1982) Transtheoretical Model of Change (TMC). In terms of behavioral change, Miller and Rollnick (2002) indicated that "behavior change involves a process that occurs in increments and involves specific and varied tasks" (p. 201). The TMC offers counselors a conceptual framework concerning how the change process occurs. Furthermore, this framework allows counselors the freedom to implement interventions that they would consider to be

effective after taking into account the client's motivation to change (Corcoran, 2005). Thus, in applying MI, counselors learn to flex and match their therapeutic intervention strategies and styles to meet their clients' level of readiness to change.

The conceptual framework of the TMC allows counselors to focus on how clients change, rather than focusing on how to define the problem (Lambie, 2004). More so, the TMC suggests that clients move in and through six stages of change: precontemplation, contemplation, preparation, action, maintenance, and relapse. The TMC is utilized to build motivation for the client to move from one stage to the next, with the ultimate goal being that the client obtains long-term behavioral change (Corcoran, 2005).

Normalcy of Ambivalence and Resistance

The second key concept of MI concerns the perception of ambivalence and resistance throughout the change process. Ambivalence represents a state when an individual feels two different ways about a specific issue and is regarded as the primary factor in most psychological difficulties (Feldstein & Ginsburg, 2006). On the other hand, resistance is defined in MI as the client's response to defending the status quo (Hettema, Steele, & Miller, 2005). Therefore, the resolution of ambivalence and resistance represents the core of MI.

Clients who struggle with change, such as those with an addiction, often initially engage in the therapeutic process with an ambivalent or resistant outlook, as change may seem difficult or even undesired (Miller & Rollnick, 2002). Feldstein and Ginsburg (2006) noted that traditional approaches in addictions counseling (e.g., psycho-educational therapy and cognitive-behavioral theory) address client ambivalence and resistance with confrontation, education, and

authority. MI, on the other hand, views ambivalence and resistance as normal aspects of the change process, and therefore counselors using MI address this mindset with collaboration, evocation, and autonomy (Feldstein & Ginsburg). Perceiving that direct confrontation will only bring about further ambivalence and resistance, the five guiding principles that underlie MI include: (a) expressing empathy and respect, (b) developing discrepancies, (c) rolling with resistance, (d) normalizing and exploring ambivalence, and (e) supporting the client's sense of self-efficacy (Miller & Rollnick, 2002; Ingersoll, Wagner, & Gharib, 2006). A closer look at each of these principles is warranted, as it will provide a framework for the working elements that make MI an effective and efficient counseling approach (and thereby strengthen the case for using MI as a possible approach to using EBP in the counselor education curriculum).

Expressing empathy and respect. Many experts perceive MI as an evolution of the client-centered approach, partly due to the emphasis placed on the core conditions of counseling (Madosn, 2005), with the highest regard focusing on the counselor's ability to genuinely express empathy. Although the counselor utilizes reflections to convey an understanding of the client's perspective without criticism and in a nonjudgmental manner, the counselor will depart from the client-centered approach in order to foster the clients intrinsic motivation to change (Corcoran, 2005; Engle & Arkowitz, 2006).

Developing discrepancies. The second principle of MI suggests that the counselor assists clients in discovering discrepancies between their current behaviors with that of their future goals and values. As such, the counselor will help the client to compare and contrast advantages and disadvantages of his or her present lifestyle with the advantages and disadvantages of the desired lifestyle. Thus, the counselor establishes an environment that encourages the client to

reflect on his behaviors, and consequently assist the client to progress from one of the TMC stages of change to the next (e.g., from contemplation to preparation).

Rolling with resistance. According to the MI perspective, resistance is perceived as a result of the counselor's *tactics*, not as a result of the client's readiness to change (Corcoran, 2005), and therefore, is used as a source to gather information regarding the client and his or her level of readiness to change (Engle & Arkowitz, 2006). Rolling with resistance characterizes the third guiding principle of MI. As such, counselors do not avoid or oppose the resistance; rather, the counselor will acknowledge and employ reflective responses to defuse the resistance and remove potential power struggles. MI observes resistance as normal and it is the objective of the counselor to reduce resistance because long-term changes are associated with lower resistance (Lambie, 2004).

Normalizing and exploring ambivalence. As mentioned earlier, MI also considers an ambivalence to change as a normal aspect of the change process. Accordingly, normalizing and exploring ambivalence to engaging in the change process denotes the fourth MI principle. Here, the counselor can pose questions to elicit "change talk"; that is, the client's own reasons for change (Miller & Rollnick, 2002). According to Ingersoll and colleagues (2006), "if ambivalence is respected, explored, and protected, less resistance emerges, and therefore fewer therapeutic impasses are generated" (p. 13).

Supporting the client's sense of self-efficacy. The final guiding principle of MI involves supporting the client's sense of self-efficacy or belief in his or her own ability to change. According to Miller, Zweben, DiClemente, and Rychtaric (1995), self-efficacy is essential in promoting successful client change. Fields (2004) added that when clients maintain low self-

efficacy, treatment outcomes tend to be poor. On the other hand, Moyers and Martin (2003) found that when counselors fostered client self-efficacy, clients expressed greater change talk and lower levels of resistance. Thus, it is important for the counselor to increase the client's confidence in his or her ability to change and maintain that change.

Experts suggest that when counselors utilize the aforementioned MI guiding principles, the counselor can form a collaborative relationship with the client whereby the client becomes his or her own advocate for change (Feldstein & Ginsburg, 2006). The efficacy of MI has been the focus of many empirical studies during the past two decades with a variety of problematic behaviors in an assortment of settings. Prior to addressing previous empirical research conducted on MI, it is important to reiterate that MI has expanded from addictions counseling into various forms of mental health counseling. The following review of MI studies will not only demonstrate MI as an effective EBP with various client populations, but it will also highlight the congruency of MI principles with the philosophy which guides the profession of counselor education (i.e. relationship-based interventions). Since MI originated in addictions counseling, empirical research from this field will be addressed first and then this review will transition into research addressing other applications of the theory. Finally, this review will conclude with an evaluation of the research that focuses on MI in an educational context.

Motivational Interviewing and Substance Abuse Treatment

The foundation of MI emerged from the treatment of chemical addictions, namely alcohol (Miller, 1983). As such, the majority of the early research on the efficacy of MI occurred within addictions counseling. Miller, Sovereign, and Krege (1988) conducted the first study that

evaluated the process of MI in the form of the Drinker's Check-Up (DCU). The authors

advertised the study as a free check-up for drinkers to assess the effect of drinking on the

participants' lives. The study utilized random assignment to place participants in one of three

groups: a group that obtained DCU treatment, a group that received DCU treatment in addition to

a comprehensive referral list, and a six-week waiting list group. The experimental group received

two counseling sessions: an assessment session and an intervention session. After the initial

assessment, the authors offered participants feedback concerning health-relevant information, but

did not enforce the treatment on the participant. Consequently, the participants were responsible

for deciding what to do with the information. During the intervention session, the participants

received formal feedback in an empathic manner concerning the results of the assessment.

Furthermore, the participants were offered advice concerning change, while acknowledging the

individual's personal choice and responsibility to change. The authors found significant, but

modest (27%), reductions in drinking behaviors shortly after DCU, which were upheld at 12-

month follow-ups. However, a limitation of the study concerns the issue that the authors did not

indicate how feedback was offered, or how, if at all, counselors were trained to provide

feedback. Since counselors utilized MI as a counseling approach, rather than a set of techniques,

MI warranted research to assess its efficacy in various settings.

Miller (1996) suggested that Project MATCH (Matching Alcoholism Treatments to

Client Heterogeneity; Project MATCH Research Group, 1993) was the first real assessment of

MI "…as a stand-alone treatment for alcohol problems in a clinical population" (p. 839), because

it manualized MI to control for counselor variation. This manualized version of MI was called

Motivational Enhancement Therapy (MET). Furthermore, Project MATCH was a

comprehensive, randomized controlled trial of a nine-site study for the treatment of alcohol use disorders (Project MATCH Research Group, 1993). During the study, 1726 alcohol-dependent participants were randomly assigned to one of three treatment groups: a MET group, a twelve-step facilitation group, or a cognitive-behavioral coping skills training group. The Project MATCH Research Group found that those participants who received four sessions of MET benefited as much as participants that received 12 sessions of twelve-step group or 12 sessions of cognitive-behavioral coping skills. Furthermore, this study found that MET was most effective for participants that expressed higher levels of anger (i.e. resistance). This last fact suggested that MET is most effective when individuals exhibit resistance to change.

Individuals with chemical addictions often appear resistant to change. As such, researchers continued to examine the effect of MI on resistant and addicted clients. One such study assessed the feasibility and efficacy of brief interventions (i.e. advice-giving versus MI) on adolescent nicotine use (Colby et al., 1998). Forty adolescent smokers between the ages of 14 and 17 were randomly assigned to either a brief advice group or an MI group. Individuals in the brief advice group received an information packet and advice to stop smoking, whereas the individuals in the MI group received the same information packet in addition to one counseling session based on the principles of MI. The authors found 72% of the MI group reported serious quit attempts, and that the participants' stage of change was a significant predictor of future quit attempts. In fact, the authors found that 25% of the participants in the precontemplation stage reported serious quit attempts, in contrast to 75% of the participants in the contemplation stage and 92% in the preparation stage. Although no statistical differences were found between the MI and the brief advice group, the authors did find a substantial effect size that supported the

potential efficacy of the MI principles in the counseling relationship. Thus, this study prompted

other researchers to assess the efficacy of training clinicians in MI.

Ershoff and colleagues (1999) conducted one such study where the research focused on

the effect of MI training on clinicians who worked with pregnant clients to reduce prenatal

smoking behaviors. Three hundred and ninety participants were randomly assigned to one of

three groups: (a) a group where participants received a self-help booklet addressing smoking

patterns, stages of change, and lifestyles of pregnant smokers; (b) a group where participants

received the booklet along with access to a computerized telephone cessation program based on

interactive voice response technology; and (c) a group where participants received the booklet in

addition to proactive telephone counseling by nurse educators trained in MI techniques and

strategies. Although no significant differences were found among the treatment groups, a higher

percentage of individuals in the MI group did quit smoking for at least a 24-hour period.

Additionally, the authors found that MI "provided an open and nonthreatening context for

discussing the socially undesirable habit of prenatal smoking" (p. 167). Whereas nurses trained

in MI may not have observed total behavior change, the study suggested that those clients

exposed to MI-trained nurse educators were more likely to move from one stage of change to the

next (e.g., the precontemplation stage to contemplation stage); thus constituting a form of

treatment success in accordance with the developmental perspective of the counselor education

and the counseling profession.

When studies assume careful measures to ensure the integrity of MI principles, then

significant and/or meaningful outcomes can be observed. For instance, Stotts, Schmitz, Rhoades,

and Grabowski (2001) assessed the effect of MI on cocaine-dependent clients. One notable

difference between this study and others is that the authors provided a detailed training regimen

for the counselors delivering MI (i.e. didactic meetings, reading assignments, role-playing, and

viewing videotapes of William Miller). Furthermore, the counselors received ongoing

supervision throughout the course of the study in an effort to monitor protocol adherence. In

terms of the study, 105 participants were randomly assigned to a MI group or a detoxification-

only group. Results indicated that although the authors found no significant difference in

completion rates between groups, they did find significant differences in cocaine-negative urine

screen rates and detoxification completion rates. Eighty-eight percent of the participants that

received MI counseling produced a negative cocaine urine sample, compared with 62% of the

participants that received detoxification only. Furthermore, results revealed that MI counselors

assisted 59.3% of lower motivated participants to complete the detoxification program,

compared to only 34.4% of the lower motivated participants that did not receive MI counseling.

Though the authors took steps towards training counselors in accordance to the MI spirit, the

study fell short in terms of evaluating the fidelity of the MI implementation. Thus, it is difficult

to assess whether the counselors incorporated the spirit of MI from the description of the study.

Nonetheless, the authors contend that emphasizing MI principles in the training produced

significant treatment outcomes. This contention further supports the need for the current study to

assess how counselor educators rate the importance of MI principles in the counseling

relationship.

One aspect of counselor education concerns the importance of training student-counselors

in the art of the initial assessment (Young, 2005). Carroll and colleagues (2006) assessed the

efficacy of utilizing standard treatment approaches in accordance with MI principles to enhance

treatment engagement and reduce substance use. More specifically, this multi-site, randomized

clinical trial aimed to evaluate the ability of counselors to learn and effectively implement the

spirit of MI. Overall, 423 substance users across five community based treatment facilities were

randomly assigned to either a standard intake session or an intake session where MI techniques

and strategies were integrated. Subsequently, counselors were also randomly selected to either

deliver the standard intake session or learn and express the MI principles in their counseling

session. The authors not only provided a detailed account of the training process, but they also

discussed the supervision process that the counselors received, which included an external rating

system. Independent analysis of 315 audio-taped sessions suggested that not only was MI

distinguishable from the standard intake process, but counselors also effectively implemented

techniques that were congruent with MI principles when training and supervision were provided.

Furthermore, the authors found that participants assigned to the MI group showed significantly

better retention rates at a 28-day follow-up and demonstrated less frequent use than those

assigned to the standard intake group. Thus, even small adaptations to the intake procedure can

improve treatment outcomes when counselors adhere to the spirit of MI during their sessions.

The review of the abovementioned studies provides an overview of the efficacy and

efficiency of counselors utilizing MI within the chemical addictions population. As such,

counselor educators could provide a valuable and much needed service to individuals with

chemical addictions by teaching student-counselors the fundamental aspects of MI. Before

discussing this issue, it would be important to assess how counselor educators perceive the

importance of MI principles presence in the counseling relationship. If it is determined that

counselor educators agree with the fundamental principles of MI, a case can be made for the

inclusion of MI training in the graduate curriculum, particularly for those interested in working with addicted clients (and given the co-morbidity with other psychiatric concerns, this would be a large part of many clinicians' case-loads).

Thus far, the reviewed empirical research has indicated that MI represents an effective treatment approach for individuals with chemical addictions; however, research concerning MI's efficacy with other clinical populations has also shown positive results. The next section will review empirical studies that investigated the therapeutic benefits of incorporating MI principles with clients with physical and mental health issues.

Motivational Interviewing in Practice

Clients' experiences of ambivalence and resistance to change go far beyond their recovery from addictive disorders; thus the focus of MI has branched out beyond the fields of addiction and into other mental and physical health concerns. Specifically, MI research has expanded to include areas such as schizophrenia, domestic violence, anxiety and depression, posttraumatic stress disorder, healthy eating, HIV risk reduction, and compliance with various medical recommendations. Research concerning the efficacy of MI in these areas will be explored below.

One of the earlier empirical assessments of MI outside the sphere of addictions can be attributed to Kemp, Hayward, Applewhaite, Everitt, and David (1996), who developed and implemented an MI-based model for clients diagnosed with a psychotic disorder. More specifically, the study aimed to assess the effect of an intervention, which was extensively based on the fundamental tenets of MI, on clients who were diagnosed with schizophrenia, severe

affective disorders (e.g., schizophreniform, schizoaffective, and delusional disorders), and psychotic disorder not otherwise specified. Altogether, 47 clients participated in the study, of which 25 randomly received the MI-based treatment. The intervention consisted of 4 to 6 sessions that lasted between 20 to 60 minutes. The control group received a similar number of sessions but was exposed to a strictly person-centered approach. The treatment group demonstrated significant improvements in their attitudes to medication compliance, insight into their illness, and compliance with treatment compared to the control group. Furthermore, these gains continued through a six-month follow-up. The results suggested that counselors who were trained in MI principles would not only be prepared to provide effective counseling services to clients that suffer from addictions, but would also be equipped to counsel clients outside the addiction realm. This finding supports the current study's intent to investigate counselor educators' level of agreement towards MI principles.

Another area where MI has shown efficacy beyond addictions counseling has been in working with perpetrators of domestic violence. For example, Kennerley (1999) randomly assigned 83 perpetrators of domestic violence to either a one session pre-therapy group or to an extra psycho-educational group session that focused on eliminating violence from intimate relationships. The pre-therapy group session was based on the principles of motivational interviewing, with the overall purpose of promoting engagement and decreasing resistance in the 12-session, mandated psychoeducational group sessions that followed. Kennerley found positive changes within individuals assigned to the pre-therapy group when compared to the individuals assigned to the psychoeducational group. Additionally, the author found that the motivational interviewing based pre-therapy group had definitive effects on reducing members' levels of

precontemplative behaviors. Kennerley concluded that utilizing MI principles with perpetrators of domestic violence could result in favorable treatment outcomes.

Westra (2004) found further utilities of MI beyond addictions counseling by noting MI's effectiveness with anxious and depressed clients, primarily because these clients tend to arrive in treatment at various stages of change. For example, one depressed client may initiate counseling services while in the precontemplation stage (e.g., a client who is forced into counseling by a family member and is not ready to explore the ambivalence of the status quo) whereas another may begin counseling at the contemplation stage (e.g., a client that recognizes the effect of the depression, yet is not necessarily ready to make any changes to their lifestyle that may decrease its effects). Westra utilized a single-subject design where MI was used as the treatment with three case-studies of clients who were diagnosed with various forms of anxiety disorders. The author recorded base-line scores of the case-studies using various anxiety and depression assessments. During the base-line period, the author stated that the cognitive-behavioral theory was utilized due to the empirical research that supports its use with this population. Once sufficient data was collected to establish a sound and stable base-line, the author utilized an MI approach in lieu of the cognitive-behavioral approach. Assessment scores were then re-collected to determine the effect of MI on the case-studies. The author found that all three case-studies significantly responded to the MI approach. Although certain inherent limitations exist with this type of research design (e.g., threats to internal and external validity), results were significant because the design was replicated with three different subjects that had varying degrees of anxiety and depression, and only one variable was manipulated to obtain the results (i.e. changing the cognitive-behavioral approach to a motivational interviewing approach).

Additionally, the author noted that all three case-studies exhibited resistance to the initial

cognitive-behavioral approach and that MI allowed the case-studies to move forward in their

treatment. Hence, this study suggests that counselors trained in MI principles would, at the

minimum, possess an alternative approach if the initial evidence-based practice is met with

resistance.

In addition to the empirical studies already mentioned, theoretical position papers have

also been written on the use of MI with various mental health disorders. For example, Murphy

and Rosen (2006) described their success of implementing a MET group with clients diagnosed

with posttraumatic stress disorder (PTSD). The goals of the MET group were aimed at helping

clients make decisions about changing those problematic behaviors that interfered with their

engagement in the counseling sessions. The authors contended that utilizing techniques that the

were congruent with MI principles not only fostered engagement in treatment, but also allowed

for more adaptive post-treatment coping. In another example, Patel, Lambie, and Glover (2008)

described the use of MI with juvenile sex offenders. Here, the authors utilized the principles of

MI to overcome client resistance to treatment engagement and denial of sexual offenses. Again,

the claim was made that the use of MI principles seemed to promote treatment outcomes.

Although these studies did not necessarily offer empirical support, they did suggest that the MI

principles could be applicable to a variety of clinical populations. As such, the current study

investigates how counselor educators rate the presence of MI principles in counselor education

curricula as this could be the first step towards the promotion of an EBP that matches the

developmental philosophy of counselor education and the counseling profession.

In addition to mental health issues, research has demonstrated the usefulness of MI when clients present with issues related to their physical health. For instance, Berg-Smith and colleagues (1999) conducted a study where MI was utilized with adolescents to improve dietary adherence. The authors conducted a randomized pre-to-post intervention design, where the baseline and post-intervention data were collected an average of 3.3 months apart. A total of 334 adolescents participated in the study, of which 127 were exposed to the treatment group. Counselors that were providing the treatment received 18 hours of training in MI, and implemented MI strategies during the initial assessment session and at the 4 to 8 week follow-up session. Results of the treatment group indicated that their proportion of calories from fat and dietary cholesterol decreased significantly. Furthermore, the authors suggested that MI engaged participants in personalized goal setting for those that were ambivalent about dietary change. This study further emphasizes how the MI principles are well-matched for the counseling profession where clients are seen as the key component to the change process.

The risk of infection from human immunodeficiency virus (HIV) seems to be another area that receives attention in terms of assessing the efficacy of MI. For example, Carey and colleagues (2000) conducted a randomized clinical trial evaluating a MI-based intervention on 102 women in order to reduce risk-taking behaviors that could possibly lead to the contraction of HIV. More specifically, the sample included women who were not pregnant and met at least one of the following inclusion criteria: a life time history of injection drug use, a sexually transmitted disease, sex trading, multiple partners in the past year, and/or a perception that a partner has not been monogamous in the past year. After prescreening for appropriateness, the participants were randomly assigned to one of two groups, a MI-based risk-reduction group and a

psychoeducational/life-skills control group. The study found that participants in the MI-based group increased their knowledge and risk awareness, demonstrated greater intentions of practicing safer sex, increased communication with partners, reduced substance use proximal to sexual activities, and decreased frequency of unprotected vaginal intercourse. One of the adaptations of MI in this study concerned the role of the counselor. Here, the counselor providing the MI intervention utilized more of an educator role, similar to counselors who utilize a cognitive-behavioral approach, as the authors contended that many individuals that exhibit risky sexual behaviors may not have the interpersonal and condom use skills needed to enact safe sex procedures and practices. This final point suggests that the tenets of MI can incorporate tenets of other approaches in an effort to best serve the needs of the client. Thus, highlighting the attractiveness of this approach to counselors who may not have a fixed theoretical approach, such as novice counselors (Spruill & Benshoff, 2000).

As mentioned earlier, client resistance is manifested in a variety of populations. For example, Wilson and colleagues (1993) suggested that resistance towards medication adherence is steadily rising. As such, Schmaling, Blume, and Afari (2001) assessed MI's efficacy to enhance knowledge and skills concerning asthma self-care and improve attitudes towards medication compliance. The study randomly assigned 25 participants with asthma to one of two groups: a brief educational intervention group or an education plus MI group. Counselors that provided the MI intervention completed a standard 15-hour training with a certified MI trainer. The counselors then implemented MI strategies during the initial assessment and the follow-up session one-week later. Results indicated that participants that received education alone exhibited a decrease in level of readiness to comply with their medications, whereas participants in the MI

group showed an increase in level of readiness to adhere to consuming the prescribed

medication. Furthermore, participants in the MI group that described themselves as traditionally

noncompliant with medication adherence during the initial session demonstrated an increase in

positive attitudes towards medication adherence when compared to the education only group.

Although actual medication compliance was not addressed in this study, the findings did suggest

that counselors trained in MI principles created an environment where clients were more

receptive to valuable information despite client resistance.

The aforementioned studies indicate that the guiding principles of MI can transcend the

fields of addictions counseling. Given the demonstrated effectiveness of MI across client

populations, a compelling argument can be made for student-counselors to learn about MI in

counselor education programs. This is especially important given that other health-related fields

have already begun teaching this evidence-based practice to their students. And yet a detailed

review of counseling theory textbooks by this researcher suggests that counselor education

programs do not teach (or at the very least *briefly* teach) the tents of the MI to their students.

Since counselor educators train student-counselors, it would be important to assess how

counselor educators rate the importance of MI's guiding principles being present in the

counseling process. To help set this stage, the following section will describe how the other

helping professions have prepared their students in the implementation of MI.

Training in Motivational Interviewing

During the past two decades, researchers have investigated the efficacy and fidelity of MI

in a variety of settings and with various populations. As it has been noted, research suggests that

MI is a valid and effective evidence-based approach to assisting clients in changing problematic behaviors. As such, literature related to the teaching and training of MI to students of various helping professions is discussed below.

Interestingly, one of the earliest fields that saw the benefits of teaching MI to their students was dentistry. In an attempt to decrease client resistance and promote healthy oral behaviors, Koerber, Crawford, and O'Connell (2003) conducted a study to assess the effect of MI on the behaviors of dental patients. The authors utilized a randomized pretest-posttest design with twenty-two dental students. As part of the regular dental school curriculum, all of the participants attended a seminar on the oral health effects of tobacco-use and received information on a standardized smoking-cessation intervention. The experimental group received an additional 12-hour MI training, which consisted of 3 four-hour sessions at one-week intervals. Five domains of outcome measures were collected during the study: implementation of MI strategies, patient's level of involvement during the session, the degree of rapport between the patient and the dental student, perceived effectiveness of promoting patient change, and the dental students' self-efficacy of implementing smoking-cessation interventions. The authors found clinically and statistically significant differences between trained and untrained groups. Participants in the experimental group displayed more MI-specific techniques (e.g., an increase in the frequency of open-ended questions) and patients were more actively involved in the session (e.g., an increase in the frequency of change-talk and the number of questions asked by the patient). The results from this study indicated that MI training assisted dental students to develop some basic helping skills. As such, MI training in counselor education programs should assist, at the minimum, in the development of the foundational counseling skills.

Traditionally, non-psychotherapeutic focused physicians do not receive training in counseling and communication skills; however, the Association of American Medical Colleges recommended that medical students promote healthy behaviors and medical compliance in their patients, especially when physicians encounter patient resistance (Yeager et al., 1996). As such, Poirier and colleagues (2004) sought out to assess the effectiveness of MI training on improving medical students' knowledge of, and confidence in, their ability to counsel patients regarding positive health behavior change. The authors incorporated all the students enrolled in a health behavior change course at the Mayo Medical School and refocused the last five class sessions for MI training. Prior to the initial discussion of MI, 42 first-year medical students completed pre-course questionnaires designed to measure their knowledge of MI and confidence of implementing MI to facilitate health behavior change. At the end of the fifth session the students completed an identical post-course questionnaire. Results indicated that a statistically significant improvement occurred in confidence levels and post-course knowledge of MI. Overall, the authors found that participation using didactic teaching, role-playing with simulated patients, and direct feedback significantly improved the students' knowledge of MI techniques and strategies, who otherwise had no training in counseling or communication. As such, MI training could have a much grander effect on student-counselors because the entire curriculum of counselor education is geared towards the development of counseling or communication skills.

Martino, Haeseler, Belitsky, Pantalon, and Fortin (2007) advanced the previous study by investigating student-physicians' ability to implement MI appropriately. More specifically, the authors developed and tested a curriculum to teach MI to third-year medical students. A pretest-posttest and 4-week follow-up design assessed the students' MI skills and their knowledge and

attitudes toward the approach. The sample consisted of 45 third-year medical students who were exposed to patient-centered communication skills throughout their educational program. Participants were taught the central elements of MI during a two-hour block, where the student-instructor ratio was two to one. The authors documented significant increases in student-physicians' MI responses (i.e. frequent use of open questions and deeper reflection statements), MI knowledge, interest in MI, confidence in their ability to use MI, and commitment to incorporate MI in their future medical practices. Even with the authors' noted limitations, the results indicated that MI training helped students learn the foundational helping skills, including those students who had little-to-no counseling training.

Following the lead in the medical field, the field of psychiatry investigated the utility of MI as a component of practitioner training. For example, Chanut, Brown, and Dongier (2005) surveyed MI literature to discuss its possible effect on teaching communication skills to clinical psychiatrists. Their review of 30 well-controlled clinical trials yielded findings that suggested that MI training increased the empathic communication skills of psychiatrists. Furthermore, the authors found that MI training produced positive treatment outcomes for clients in relatively short periods of time. Whereas these authors noted that empirical MI literature in psychiatric care is sparse, they contended that MI would be an instrumental training component given that the integrity and efficacy of MI are more developed than most other psychotherapeutic approaches.

Following psychiatry's footsteps, another review found overtones of teaching MI to clinical psychology graduate students (DiLillo & McChargue, 2007). More specifically, the authors initiated the incorporation of MI training to students in the psychology program at the University of Nebraska-Lincoln because they contended that since psychologists are traditionally

trained in the medical model to diagnose symptoms, they may miss out on being trained in a more holistic model that appreciates the effect of individual values on behavioral choices. As such, the authors intended to assess whether MI-training would enhance or interfere with this type of educational philosophy. Students in this program enrolled in a 3-credit hour course during the second semester of their first year of training that integrated the theoretical tenets of MI. It was suggested that MI provided educators a standardized evaluation for assessing student-psychologist competence because many of the principles of MI were founded on the basic therapeutic skills (e.g., reflective listening, summarizing skills, and navigation of client resistance). The authors found that the incorporation of MI in the curriculum helped student-psychologists become more understanding of the values and preferences that each individual client brought into the therapy session. Accordingly, MI-training in counselor education programs would also likely promote student-counselors' abilities to assess the effect of client values and preferences as they relate to the counseling process. Thus, a study that assesses counselor educators' agreement towards the principles of MI is warranted.

In 2001, Barsky and Coleman conducted a study to assess the appropriateness and efficacy of training MI to graduate students in social work. This study was broken down into three stages. The first stage consisted of a Delphi study with social work practitioners to discern the skills required for effective practice using MI. Social work graduate students were taught MI during the second stage. Finally, three observers rated the students ability to implement MI with simulated clients in third stage. The study found that after learning MI, students were able to make intentional decisions about how to intervene with clients based on the clients' internal level of motivation to change. The authors contended that MI training at this level not only benefits

the graduate students, but the social agencies and their clients would profit due to having social workers that are educated in an effective, research-based model.

Madson, Loignon, and Lane (in press) conducted a metanalysis on empirical studies that assessed the effect of MI training. In their review, these authors found 27 studies that described empirical research on this topic. Whereas a handful of articles focused on the training of medical students, the authors noted that they did not find any articles related to the training of counseling graduate students. Despite the lack of MI literature associated with graduate educational experiences, the authors noted that the studies *did* indicate favorable results for training future clinicians in MI principles. As such, student-counselors could benefit from learning the basic tenets of MI in counselor education programs; however, a study that investigated counselor educators' accord towards MI principles could initiate the promotion of such practices at a systemic level (Halbur & Vess Halbur, 2006).

In terms of evaluating MI's post-graduate level training efficacy, Miller, Yahne, Moyers, Martinez, and Pirritano (2004) conducted a randomized trial to assess the effect of various modalities in which licensed substance abuse professionals learned MI. The study consisted of 140 participants that were randomly assigned to one of five training conditions: (a) a 2-day clinical workshop only; (b) a full workshop plus practice feedback when necessary; (c) the workshop plus six individual coaching sessions up to 30 minutes each; (d) the workshop, feedback, and coaching; or (e) a waiting list control group of self-guided training. Data concerning the efficacy of training was collected at baseline, immediately after training, and at the 4, 8, and 12 month periods following the training. The authors found that coaching and feedback resulted in the most statistically significant post-training proficiency gains, as

evidenced by increased client change talk and decreased client resistance. This study provides implications for assessing the perception of MI principles in counselor education programs. More specifically, the study provides support for the efficacy of providing MI training in an environment that allows for the trainee to receive feedback and coaching, both of which are consistent with the training format of counselor education programs (as they occur in practica and internships).

Although the incorporation of MI into the counselor education curriculum has the potential of benefiting the development of student-counselors, it is unclear whether counselor education programs are following the path of implementing such evidence-based practices due to the paucity of literature concerning this topic. In fact, a through literature search revealed that the counselor education flagship journals (i.e. *Counselor Education and Supervision* and the *Journal of Counseling & Development*) yielded only one article that was remotely related to MI (Petrocelli's (2002) article concerning the use of the TMC in counseling). Due to the lack of literature in top-tier counseling journals, it can be construed that the profession, as a whole, is not being exposed the benefits of MI. Thus, it is imperative to investigate counselor educators' attitudes regarding MI principles in order to begin exploring why this gap in the literature exits.

Miller (2007) posited that the professional helping disciplines (i.e. psychology, counseling, etc.) have fallen behind the medical field due to the initiatives found within the medical field that promote the training of students in evidence-based practices. However, additional efforts to promote opportunities for MI training have been offered to helpers in the form of mini-training sessions and workshops, the efficacy of which continues to be explored. The abovementioned studies reviewed the effect of MI training with professional helpers,

particularly counselors, psychologists, and psychiatrists. Yet, Miller (2007) argued that although MI mini-trainings and workshops could enhance and sharpen counselors' skills, they do not necessarily ensure proficiency. In contrast, in-depth training and long-term commitment may ensure MI fidelity and quality (Chanut et al., 2005). As such, counselor education graduate programs may provide the best venue to ensure optimum training. However, counselor education has yet to incorporate this approach, whereas competing fields to counselor education (e.g., social work [Wahab, 2005] and clinical psychology [Martino, 2007]) have published the benefits of MI in their discipline-specific, top-tier journals. Thus, it is essential to assess counselor educators' perspectives of MI principles to help establish a presence in this emerging and empirically based approach.

The overall intention of the above section was to not only highlight the relevancy of MI as an EBP, but to also support the notion that MI is an EBP that is congruent with the developmental philosophy of counselor education. As such, this study will aim to assess how counselor educators perceive the presence of MI principles in the counseling relationship in an effort to warrant the notion that that MI training in the graduate curricula would be beneficial.

Summary

EBPs warrant much attention within counselor education programs due to the influence of managed healthcare and session-limited counseling. Additionally, it seems that other disciplines that compete with counselor education (e.g., psychiatry and social work) have begun to train their students in EBPs. As the movement towards EBPs continues to grow, it is important

to investigate counselor educators' attitudes and perceptions regarding its place in the counselor education curricula.

Literature supports the notion that a fundamental difference exists between the developmental approach of the counseling profession and the manualized approach of most EBPs, which leads to the lack of EBP training in counselor education curricula. However, MI affords counselors and counselor educators an approach that is not only supported by a vast amount of empirical research, but MI tenets also match the developmental philosophy that many counselors and counselor educators hold. Thus, investigating how counselor educators rate the importance of MI's guiding principles in the counselor education curricula may establish the first step to disseminating an EBP in the counseling profession that matches its developmental roots. The next chapter will address the methodology and research design for the current study.

CHAPTER THREE: METHODOLOGY

This chapter will outline the methodology utilized to test the hypothesis stated in the first chapter. Specifically, this chapter will provide a detailed description of the intended population of whom this study was assessing, the data collection procedures followed in this study, the instruments utilized in this study, and the research design employed to address the stated research questions. The overall goal for this quantitative study was to investigate counselor educators' attitudes towards the adoption of EBPs in counselor education curricula.

Population and Sample

The target population consisted of current counselor educators (i.e. faculty members who provide curricular and clinical experiences for students in counselor education programs). Counselor educators were selected as the target population due to their unique and influential role in promoting the growth of individuals within the counseling field (Hill, 2002). Calley and Hawley (2008) found that 79% of counselor educators were members of the national organization of counselor educators: the Association for Counselor Education and Supervision (ACES). As such, it was determined that the most convenient source from which to sample would be the ACES organization. Additionally, previous studies have indicated that ACES represents a geographically stratified national sample of counselor educators (Hill, 2002; Kahn & Kahn, 2001; Kircher, 2007; Rawls, 2008).

According to R. A. Sites (personal communication, February 9, 2009), ACA liaison for Membership and Association Services, the ACES membership consists of 2,367 members, of which 675 members identified as counselor educators (the rest of whom identified as students,

supervisors and/or counselors.). As counselor educators were the focus of the current study, those who identified as something other were excluded from the data collection process. Utilizing a 5% margin of error, a 95% confidence level, and 675 participants as the accessible population, it was determined that 246 counselor educators would provide a representative sample of counselor educators in ACES (Sivo, n.d.). The number of respondents for this current study was 269 (a 39.8% response rate). The following section will provide a detailed description of the data collection procedures utilized in this study.

Data Collection Procedures

This study recruited counselor educators from ACES to participate in a web-based survey. Specifically, the names and email addresses of counselor educators in ACES were obtained by contacting the American Counseling Association (ACA), as ACA's database contains the contact information for all ACES members (McGlothlin, 2001). Prior to contacting potential participants, approval for the study and recruitment process was obtained from the University of Central Florida's Institutional Review Board (see Appendix A). In order to maximize the response rate, this study followed Dillman's (2007) Tailored Design Method. The Tailored Design Method involves five essential contact points to increase response rates (see Appendix B). Each of these points is discussed below.

In regards to the first aspect of the Tailored Design Method, potential participants received a pre-notice email. Dillman (2007) posited that a pre-notice email increased response rates because participants were less likely to discard short, concise emails as opposed to emails that appear long, time-consuming, and cumbersome. In addition, it is important to note that all

emails were prepared as personalized messages in order increase response rates. As such, every potential respondent received a personalized pre-notice email, which included a condensed description of the study and a statement indicating that the participant will receive a link to a brief, web-based study in the upcoming days.

According to the second aspect of the Tailored Design Method, participants received a second email with a detailed description of the study and a hyperlink to the web-based questionnaire. Additionally, this second email contained the informed consent, which emphasized the confidential nature of the study, described the risks and benefits to participating in the study, and provided contact information for the Institutional Review Board and the researcher.

Two weeks following the second email, the researcher addressed the third point of the Tailored Design Method by either sending either thank-you emails (to those who submitted the web-based questionnaire) or reminder emails to complete the survey (to those who had not yet submitted the web-based questionnaire). The thank-you emails acknowledged their participation and reemphasized the confidential nature of the study. For potential participants receiving reminder emails, a hyperlink to the web-based questionnaire was included in the text.

Following another week the researcher conducted a similar procedure (i.e. reminder email or thank you email) for the fourth contact point. Finally, a fifth email was sent to those individuals who had not yet responded, indicating to them that the study would be concluding in the upcoming weeks. Thus, the researcher emphasized the importance of their contribution to the study and requested their prompt response.

In order to further increase the response rate of this study, this researcher administered the survey through the online interface of *SurveyMonkey* (Finley, 2008). The online format allowed the researcher to upload the contact information of each potential participant with a unique identifier, which was used to distinguish completed surveys from uncompleted surveys or partially completed surveys. Since *SurveyMonkey* provided each participant with a unique hyperlink to the web-based questionnaire, the potential for sending inaccurate and unnecessary emails was decreased. As such, the unique hyperlink was not used for identifying purposes; rather, it was used for mailing purposes.

In terms of interface format, *SurveyMonkey* allowed the researcher to generate numerous types of items, including single response items, multiple response items, and items that contain a matrix of responses. This not only increased the esthetic format of the survey, but it also allowed the researcher to download the results in a file compatible with statistical programs such as the Statistical Package for the Social Sciences V16.0 (SPSS; SPSS Inc., 2007). Appendix C contains the online survey. The following section will describe the instruments that were included in the survey.

Instrumentation

This study included two established instruments and a demographic questionnaire that was developed by the researcher. The established instruments were chosen in accordance with Ajzen's (1991) Theory of Planned Behavior. This framework suggests that engagement in specific behaviors correlates with one's attitude concerning the behavior, one's beliefs about

how others perceive the behavior, and one's perceived control over the barriers to executing the behavior (Mackenzie et al., 2004). The instruments are discussed below.

Evidence-Based Practice Attitudes Scale (EBPAS; Aarons, 2004)

The EBPAS measures individuals' attitudes towards the adoption of innovations. In response to the dissemination and implementation of the EBPs in mental health settings, Aarons (2004) developed an instrument that allowed for quantitative assessment of helping professionals' attitudes towards the diffusion and adoption of EBPs in a variety of mental health settings. As such, the underlying intention of this instrument was to assess provider readiness to adopt new practices in order to be promote innovation implementation (Aarons, McDonald, Sheehan, & Walrath-Greene, 2007).

Overall, the EBPAS is a 15-item measure that requires participants to rate specific statements using a five-point Likert scale, where the scale ranges from 0 (Not at all) to 4 (To a very great extent). The items are scored according to four subscales: appeal, requirements, openness, and divergence. Items in the *appeal* scale refer to participants' attraction to EBPs. The *requirements* scale measures willingness to integrate EBPs when others demand it. Items in the *openness* scale refer to the degree to which one would be open to changing. Finally, the *divergence* scale assessed the extent to which EBPs are viewed as ineffective.

The psychometric characteristics of the EBPAS were based on the results from 322 mental health professionals from 51 facilities/agencies. Factor analysis confirmed a four-factor solution. Cronbach's alpha ranged from .90 to .59 for the four factors: requirements (three items; $\alpha = .90$), appeal (four items; $\alpha = .80$), openness (four items; $\alpha = .78$), and divergence (four

items; α = .59). Additionally, Aarons (2004) claimed that results support face and content validity of the EBPAS, and that individual differences and organizational context variables resulted in high construct validity of the instrument. Furthermore, previous studies have demonstrated the utility of the EBPAS (Gioia, 2007; Henggeler et al., 2008; McGuire, 2006); thus, the EBPAS represents a reliable and valid instrument.

BARRIERS Scale (Funk et al., 1991)

The BARRIERS Scale measures perceived barriers to the diffusion of innovation in a practice setting (Funk et al., 1991). Originally developed in response to the EBP movement, Funk and colleagues developed the BARRIERS Scale to quantify the opinions of nurses on their perception of barriers to the utilization of research in the nursing profession (Hutchinson & Johnston, 2006). Since its conception, the BARRIERS Scale has been adapted on several occasions to measure the perceived barriers to the use of innovations in varying occupations (Hemsley-Brown & Oplatka, 2005; Kim, 2005; McGuire, 2006).

Overall, the BARRIERS Scale is a 29-item, self-report measure that requires participants to rate the extent an item is perceived as a barrier (Funk et al., 1991). Each item is rated on a Likert scale from 1 (to no extent) to 4 (to a great extent), reflecting the degree to which the item is perceived as a barrier. Additionally, a "no opinion" response is provided, which is denoted by the value of 5. Following the 29 Likert scale items, the scale affords the respondent an opportunity to provide additional barriers that may not have been incorporated into the scale. The instructions will then ask the respondent to rank his or her top three "written-in" barriers.

The psychometric properties were based on a response sample of 1,948 participants from 22 states (Funk et al., 1991). Factor analysis identified four factors in the BARRIERS Scale. The first factor, *characteristics of the potential adopter*, included eight items loading from .40 to .78 and assessed the respondent's research values, skills, and awareness. The second factor, *characteristics of the organization*, included eight items loading from .41 to .80 and identified barriers and limitations of the practice setting. The third factor, *characteristics of the innovation*, included six items loading from .41 to .77 and reflected potential issues concerning the research methodology. The fourth factor, *characteristics of the communication*, included six items loading from .40 to .65 and measured the effect of the presentation and accessibility of the research.

Following the factor analysis, Funk et al. (1991) calculated the internal consistency for the four factors using the entire sample. Cronbach's alpha for Factors 1, 2, 3, and 4 were .80, .80, .72, and .65, respectively, indicating good reliability. Furthermore, the item-total correlations for the four factors were all in an acceptable range (.30 to .65). In addition to measuring internal consistency, the authors obtained estimates for test-retest reliability of the BARRIERS Scale using an additional sample of 17 master's level students who were currently employed in clinical settings. These respondents completed the assessment on two occasions, one week apart. Pearson correlations ranged from .68 to .83, indicating adequate stability over a brief period of time.

In terms of validity, Funk et al. (1991) contended that the items of the BARRIERS Scale possess face and content validity. A panel of judges originally established the inclusion of items; the authors then pilot-tested the instrument with graduate students. The respondents were asked to specify and rate additional barriers that they perceived were not included in the BARRIERS Scale. The authors stated that none of the additional barriers were cited by more than 10% of the

sample. As such, the lack of specification of the additional barriers added credence to the content validity of the BARRIERS Scale.

Since this instrument originated in response to the research-practice gap in nursing and nursing education, the wording of the items in the BARRIERS Scale are specific to nurses. However, several authors have adapted the BARRIERS Scale for application to their specific studies and reported comparable psychometric results to that of the original study. For example, Hemsley-Brown and Oplatka (2004) modified the BARRIERS Scale to assess the perspectives of school principals from England and Israel regarding their reported barriers to utilizing EBPs in the classroom. The authors reported that their study obtained a Cronbach alpha of .82 for the BARRIERS Scale. McGuire (2006) also adapted the BARRIERS Scale for use with social workers and obtained a Cronbach alpha of .81. Following in the precedent of adapting the BARRIERS Scale to specific populations, this study will change the word "nurse" to "counselor educator." With regards to maintaining the constructs of the BARRIERS Scale while making the items more appropriate for this study, the psychometric qualities will be assessed.

Demographic Questionnaire

An exhaustive literature search of various databases (i.e. Academic Search Premiere, ERIC, PsychINFO, WorldCat, ProQuest, and Google Scholar) yielded no instrument that assessed attitudes towards the guiding principles of MI. As such, this researcher developed items designed to assess respondents' agreement towards the importance of MI principles being present in the counseling relationship. Specifically, these items used a five-point Likert scale that ranged from 1 (Strongly disagree) to 5 (Strongly agree), and asked respondents to rate their level

of agreement towards the five foundational concepts of MI being present in the therapeutic alliance.

Since items on the demographic instrument were utilized as a supplement to the previously mentioned established inventories, these items were pilot tested with 3 counselor educators and 15 doctoral students for item objectivity and item clarity. Recommendations to strengthen the items were obtained and considered; revisions were made accordingly. In terms of psychometric properties, a factor analysis and Chronbach's alpha were calculated during the post data collection process. It was suspected that an exploratory factor analysis would result in two factors. Since MI is defined as a directive, client-centered approach (Miller & Rollnick, 2002), the principles that are directive in nature (i.e. navigating resistance and identifying discrepancies) should align in one factor and the principles that are client-centered in nature (i.e. expressing empathy, normalizing and exploring client ambivalence, and supporting self-efficacy) should align in another factor. A detailed analysis of the exploratory factor analysis and reliability analysis of the MI items can be found in Chapter 4.

In addition to the MI-specific items, the questionnaire contained traditional demographic items (e.g., gender, ethnicity, and age). Furthermore, the questionnaire inquired about respondents' academic/clinical experience, counselor education experience, and training in EBPs. In terms of academic background, the questionnaire asked respondents to identify the year in which they earned their doctoral degree and the discipline of that degree. Clinical background variables included theoretical orientation, professional clinical identity (e.g., psychologist, mental health counselor, addiction counselor), and number of years that the respondent had been in the helping profession.

In terms of counselor education experience, the demographic questionnaire inquired about length of time the respondent had been a counselor educator. Respondents also were asked to identify their primary counselor education focus (e.g., addiction counseling, career counseling, clinical mental health counseling, school counseling, marriage, couple and family therapy, and/or student affairs and college counseling). Furthermore, counselor educators' employment variables included professoriate rank, associated ACES region, type of program at which the respondent was employed (i.e. master's only program or doctoral granting program), and the program's CACREP accreditation status. Finally, the demographic questionnaire asked respondents to report the type(s) of training, if any, received in EBP. Training variables included graduate course, certification program/workshop, seminar/continuing education, on-the-job training, self-study, and no formal training. It should be noted that for purposes of analyses the training variables were dichotomized into formal training received vs. no formal training received. Formal training received included graduate course, certification/workshop, and seminar/continuing education; where as no formal training received included on-the-job training, self-study, and no formal training (Sheehan, Walrath, & Holden, 2007).

Data Analysis

The overall purpose of this study was to investigate counselor educators' attitudes towards EBPs and perceived barriers to teaching EBP in counselor education curriculums. Additionally, this study aimed to investigate counselor educators' level of agreement towards MI's principles being present in the counseling relationship. As such, this researcher analyzed four research questions using two instruments and a demographic questionnaire. Results from the

data analysis were reported through summary tables and interpretations. The significance level for all analyses were set at the .05 level, as this is the conventional level used in most social science and educational research. The analysis and variables for each research question will be described below.

Research Question One

       Do counselor educators' attitudes towards evidence-based practices differ by individual factors?

       Hypothesis 1a. Counselor educators with specialized training in evidence-based practices will score higher on the *Evidence-Based Practice Attitude Scale* when compared to counselor educators with no specialized training in evidence-based practices.

       Hypothesis 1b. Counselor educators with less than 10 years of professoriate experience in academia will score higher on the *Evidence-Based Practice Attitude Scale* when compared to counselor educators with 10 or more years of professoriate experience in academia.

       Hypothesis 1c. Counselor educators with a clinically focused professional identity will score higher on the *Evidence-Based Practice Attitude Scale*, when compared to counselor educators with a vocationally focused professional identity.

       Analysis. A multivariate analysis of variance (MANOVA) was used to simultaneously explore the differences between the categorical independent variables (counselor educators' status of either receiving or not receiving specialized training in evidence-based practices, counselor educators' status of either having or not having at least 10 years of professoriate experience, and counselor educators' primary focus in counselor education) and the metric

dependent variables (counselor educators' scores on the four subscales of the *EBPAS*).

Furthermore, post hoc analyses were calculated upon indication of significant differences.

Research Question Two

Do perceived barriers to the inclusion of evidence-based practice in counselor education curricula differ by organizational factors?

Hypothesis 2a. Counselor educators who teach at doctorate granting programs will score lower on the *BARRIERS Scale* when compared to counselor educators who teach at masters only programs.

Hypothesis 2b. Counselor educators who teach at CACREP accredited programs will score lower on the *BARRIERS Scale* when compared to counselor educators who teach at non-CACREP accredited programs.

Hypothesis 2c. Counselor educators who are employed as core faculty members will score lower on the *BARRIERS Scale* when compared to counselor educators who are employed as noncore faculty members.

Analysis. A multivariate analysis of variance (MANOVA) was used to simultaneously explore the difference between the categorical independent variables (doctoral granting or masters only counselor education program, status of CACREP accreditation, and faculty position) and the metric dependent variables (counselor educators' scores on the four factors of the *BARRIERS Scale*). Furthermore, post hoc analyses were calculated upon indication of significant differences.

Research Question Three

Do counselor educators' attitudes towards evidence-based practices influence the extent to which situations are perceived as barriers with regards to the inclusion of evidence-based practices in counselor education curricula?

Due to the exploratory nature of this question, this researcher will utilize correlational analysis to investigate the hypothesis, which states that a negative correlation will exist between counselor educators' attitudes towards EBPs, as measured by the *EBPAS*, and their perceived barriers towards the inclusion of EBPs in counselor education curricula, as measured by the *BARRIERS Scale*. Although correlational research does not predict causation, it will provide information on the strength of the relationship (r) between variables. As such, a linear regression will be conducted to assess the strength of the relationship between the total score of the *EBPAS* and the total score for the *BARRIERS Scale*.

Research Question Four

Do counselor educators' reported levels of agreement to motivational interviewing's presence in the counseling relationship influence their attitudes towards evidence-based practices?

Due to the exploratory nature of this question, a correlational analysis will be utilized to investigate the hypothesis, which states that a positive correlation will exist between counselor educators' reported levels of agreement towards the inclusion of MI principles in the counseling relationship and their attitude towards evidence-based practices, as measured by the *EBPAS*. A linear regression will be calculated to assess the strength of the relationship between the overall

scores concerning counselor educators' agreement towards MI guiding principles being present in the counseling relationship and their total scores on the *EBPAS.*

Summary

This chapter discussed the data collection procedures and the population for whom this study was intended. Furthermore, this chapter examined the attributes for the utilized instruments and demographic questionnaire. In addition to introducing the research questions, this chapter also provided support for the proposed statistical analyses. The following chapter will continue with a discussion regarding the results of this study.

CHAPTER FOUR: RESULTS

This chapter will present the data collected as it relates to both counselor educators'

willingness to adopt EBPs into counselor education curricula and whether MI could potentially

be perceived as a valuable EBP to include in counselor education curricula. The results are

divided into three sections: (a) the demographic data obtained from the sample, (b) the reliability

and validity scores of instruments based on the sample population, and (c) the analysis of

differences with regards to individual factors and organizational factors towards counselor

educators' willingness to adopt EBPs in counselor education curricula. The third section will also

highlight the correlation between EBP-attitudes and perceived barriers to the inclusion of EBPs

in counselor education curricula, and correlation between the perceived importance of

motivational intervening principles in the counseling relationship and EBP-attitudes.

Demographics of the Responding Sample

Members of the Association for Counselor Education and Supervision (ACES) who

identified as counselor educators (n=269) comprised the convenience sample. Overall, 675

counselor educators were invited to participate in the study, resulting in a 39.8% response rate.

According to Shannon and Bradshaw (2002) response rates for electronic surveys typically range

from 32% to 35%. Thus, the response rate for this study exceeds the average response rates for

most studies that utilize a web-based format. Frequency distributions are included to provide a

clear and concise illustration of the sample population. More specifically, the participants'

gender, ethnicity, clinical experience, counseling theory, counselor education experience,

primary counselor education identity, and faculty rank are presented below.

In relation to participants' identified gender, one hundred sixty (59.5%) participants identified as females, one hundred six (39.4%) participants identified as male, two (0.7) participants identified as other, and one (0.4%) participant did not respond to this item. In terms of ethnicity, the majority of the sample, two hundred eight (77.3%), identified their race as Caucasian, while fifteen individuals identified as African-Americans (5.6%), thirteen participants identified as Hispanics (4.8%), five identified as Native-Americans (1.9%), another five identified as Asian-Americans (1.9%), and four identified as Asian / Pacific Islanders (1.5%). Furthermore, eleven (4.1%) participants identified as other and two (0.7%) participants did not respond to this item. Table 1 describes a frequency distribution of the sample's reported gender and ethnicity.

Table 1

Frequency Distribution by Gender and Ethnicity

Characteristics	Frequency	Percent
Gender		
Male	106	39.4
Female	160	59.5
Other	2	0.7
No Response	1	0.4
Total	269	100.0
Ethnicity		
African-American	15	5.6
Asian / Pacific Islander	4	1.5
Asian-American	5	1.9
Caucasian	208	77.3
Hispanic	13	4.8
Native American	5	1.9
Other	11	4.1
No response	2	0.7
Total	269	100.0

Concerning years of clinical experience, the majority of the participants indicated that they accumulated 16 or more years of clinical experience (44.2%), followed by 6 to 10 years (27.5%), 11 to 15 years (19.3%), and 0 to 5 years (8.9%). Additionally, 26.0% of the sample indicated that their primary counseling orientation was Cognitive-Behavioral, followed by Person-Centered (13.4%), Existential (11.9%), Family Systems (11.2%), Solution-Focused (10.4%), Adlerian (8.6%), Narrative (4.5%), Reality (3.7%), Feminist (3.3%), Gestalt (3.0%), Psychodynamic (1.1), and Behavioral (0.7%). Six participants (2.2%) did not indicate a primary counseling theory. Table 2 presents the frequency distribution for the participants' clinical experience and counseling orientation.

Table 2

Frequency Distribution by Clinical Experience and Counseling Orientation

Characteristics	Frequency	Percent
Clinical Experience		
0 to 5 years	24	8.9
6 to 10 years	74	27.5
11 to 15 years	52	19.3
16 or more years	119	44.2
Total	269	100.0
Counseling Theory		
Psychoanalytic	3	1.1
Adlerian	23	8.6
Existential	32	11.9
Person-Centered	36	13.4
Gestalt	8	3.0
Behavioral	2	0.7
Cognitive-Behavioral	70	26.0
Reality	10	3.7
Feminist	9	3.3
Solution-Focused	28	10.4
Narrative	12	4.5
Family Systems	30	11.2
No Response	6	2.2
Total	269	100.0

In regards to counselor education experience, one hundred forty one (52.4%) participants indicated that had less than ten years of experience as a counselor educator, whereas one hundred seventeen (43.5%) participants reported that they accumulated ten or more years of experience. Eleven participants did not respond to this item. In relation to counselor education focus, over half (54.6%) identified their foci as Clinical Mental Health Counseling, followed by School Counseling (24.2%), Marriage, Couples, and Family Counseling (7.8%), Addiction Counseling (4.5%), Students Affair and College Counseling (3.7%), and Career Counseling (3.0%). Six participants did not respond to this item. In terms of teaching position, participants identified

their faculty rank as assistant professor (37.9%), associate professor (24.9%), full professor (20.8%), adjunct professor (8.6%), instructor (2.2%), lecturer (0.4%), and other (2.2%). Seven participants indicated that this item did not apply to them and one participant did not respond to this item. Table 3 depicts the frequency distribution of counselor education experience, counselor education focus, and faculty rank.

Table 3

Frequency Distribution by Counselor Education Experience, Counselor Education Focus, and

Faculty Rank

Characteristics	Frequency	Percent
Counselor Education Experience		
Less than 10 years	141	52.4
More than 10 years	117	43.5
No response	11	4.1
Total	269	100.0
Counselor Education Focus		
Addiction Counseling	12	4.5
Career Counseling	8	3.0
Clinical Mental Health Counseling	147	54.6
Marriage, Couples, and Family Counseling	21	7.8
School Counseling	65	24.2
Students Affair and College Counseling	10	3.7
No Response	6	2.2
Total	269	100.0
Faculty Rank		
Full Professor	56	20.8
Associate Professor	67	24.9
Assistant Professor	102	37.9
Adjunct Professor	23	8.6
Instructor	6	2.2
Lecturer	1	0.4
Other	6	2.2
Does not Apply	7	2.6
No Response	1	0.4
Total	269	100.0

Validity and Reliability Scores of Instruments

Exploratory factor analyses and reliability analyses were conducted to test for validity

and internal consistency of the EBPAS (Aarons, 2004) and BARRIERS Scale (Funk et al., 1991)

using the sample population obtained from the current study. Additionally, the researcher

compared these analyses with the statistics of validity and reliability derived in the studies from

which the instruments originated. Finally, a factor analysis and reliability analysis were utilized

to determine whether the subscales and internal consistency of researcher-developed MI items

were consistent to the hypothesized subscales.

Before testing reliability of each instruments' subscales, the convergent and discriminate

validity of each instrument was assessed. Maximum likelihood analysis was utilized as the

extraction method, while varimax with Kaiser normalization was utilized as the rotation method.

Factors with eignevalues greater than 1.0 were extracted and rotated. Thus, items that measured

the same construct possessed higher loadings in their subsequent factors as opposed to other

items.

Evidence-Based Practice Attitude Scale

In the original study, the EBPAS (Aarons, 2004) resulted in four subscales. Factor

analysis for the current study also resulted in four subscales; however, some differences in factor

loading were noted. Factor loadings for all the items, aside from items 14 and 15, in this study

(a) loaded above .40 and (b) duplicated the factor loadings from the original study. Items 14 and

15 loaded weakly (.392 and .388, respectively) on Factor 1, but also loaded closely with Factor 3

(items 9 and 10). This is of interest since the original study resulted in items 9, 10, 14, and 15

loading on the appeal scale. Due to research and theoretical arguments cited in previous studies (e.g., Aarons & Sawitzkey, 2006; Henggeler et al., 2008), in addition to the similarity in loadings found in the current study, items 14 and 15 were loaded with factors 9 and 10 to form the appeal scale. Table 4 illustrates the factor loadings for the EBPAS from the sample utilized in the current study.

After identifying the four factors of the EBPAS, the researcher analyzed the data to assess the amount of variance that each factor explained. In terms of explained variance, Factor 1 (requirements) explained 19.69%, Factor 2 (openness) explained 13.57%, Factor 3 (appeal) explained 11.67%, and Factor 4 (divergence) explained 11.40%. Therefore, the four factors accounted for 56.33% of the total variance.

In terms of internal consistency, Chronbach's alpha coefficients were analyzed on each of the subscales. In addition to the descriptive statistics, Table 5 summarizes the reliability analyses of the four EBPAS subscales for this study, which ranged from .71 to .95. Overall, the analysis indicates that the EBPAS is a valid and reliable instrument.

Table 4

Discriminate Validity of the EBPAS

	Factor			
	1	2	3	4
12. it was required by your agency?	**.972**	.023	.090	.122
11. it was required by your supervisor?	**.885**	.033	.156	.120
13. it was required by your state?	**.879**	.042	.072	.142
14. it was used by your colleagues who were happy with it?	**.392**	.177	**.294**	.078
15. you felt you had enough training to use it correctly?	**.388**	.188	**.355**	.059
4. I am willing to use new and different types of therapy	.132	**.771**	.140	.236
1. I like to use new types of therapy	-.075	**.693**	.169	-.120
8. I would try a new therapy	.062	**.643**	.156	.053
2. I am willing to try new types of therapy	.151	**.610**	.032	.238
10. it made sense to you?	.188	.157	**.867**	-.050
9. it was intuitively appealing?	.126	.202	**.806**	-.050
6. Clinical experience is more important than using manualized therapy	.057	.154	-.131	**.701**
5. Research based treatments are not clinically useful	-.002	.096	-.027	**.646**
3. I know better than academic researchers	.099	-.023	.013	**.560**
7. I would not use manualized therapy	.188	.077	.070	**.540**

Note. Rotation converged in 6 iterations.

Table 5

Construct Reliability of the EBPAS

	Mean	SD	Alpha
Requirements (three items)	7.14	3.02	0.95
Openness (four items)	11.11	2.63	0.76
Appeal (four items)	9.10	2.85	0.78
Divergence (four items)	11.15	2.95	0.71

BARRIERS Scale

Originally, the BARRIERS Scale (Funk et al., 1991) possessed four subscales. However, Funk and colleagues noted that their factor analysis originally resulted in seven factors and declared that the seven factors were reduced to four factors after examining factors two through seven for "interpretability, simplicity of structure, magnitude of the loadings, and absence of trivial factors" and finding that the factor variance, per the scree test, leveled off between factors four and five (p. 41). This issue is important to note because analysis for the BARRIERS Scale in the current study also did not result in a four-factor instrument, but rather revealed seven factors, with three items not loading on any factor. Removing the three items that did not load on any factor and reanalyzing the data resulted in a five-factor BARRIERS Scale: (a) characteristics of the innovation, (b) characteristics of the adopter, (c) characteristics of the resources, (d) characteristics of the organization, and (e) characteristics of the communication. Table 6 illustrates the factor loadings for the BARRIERS Scale from the sample utilized in this study.

The factors were then analyzed for explained variance. Characteristics of the innovation explained 10.82% of the total variance, characteristics of the adopter explained 9.81% of the total variance, characteristics of the resources explained 8.01% of the total variance,

characteristics of the organization explained 6.85% of the total variance, and characteristics of the communication explained 5.44% of the variance. Therefore, the five factors accounted for 40.93% of the total variance.

Chronbach's alpha coefficients were analyzed on each of the subscales to identify internal consistency. In addition to the descriptive statistics, Table 7 summarizes the reliability analyses of the five subscales for the BARRIERS Scale. Overall, the analysis resulted in a range of .61 to .80 for the five factors indicating that the BARRIERS Scale is a moderately valid and reliable instrument.

Table 6

Discriminate Validity of the BARRIERS Scale

	Factor				
	1	2	3	4	5
23. The literature reports conflicting results.	**.678**	.203	.017	.009	.099
10. You are uncertain whether to believe the results.	**.604**	.440	.053	.005	.090
22. The conclusions drawn from research are not justified.	**.586**	.398	.028	.041	-.032
11. The research has methodological inadequacies.	**.536**	.131	-.190	.099	.155
8. The research has not been replicated.	**.523**	.127	.159	-.010	.076
24. The research is not reported clearly and readably.	**.499**	.180	.155	-.040	.336
14. You feel the research results are not generalizable.	**.493**	.363	.145	.062	.137
17. Research reports/articles are not published fast enough.	**.376**	-.073	.251	.032	.035
12. The relevant literature is not compiled in one place.	**.363**	-.001	.252	.055	.296
20. You do not see the value.	.161	**.753**	-.011	.069	.089
16. You see little benefit for self.	.186	**.691**	.212	.070	.116
9. You feel the benefits of incorporating research will be minimal.	.235	**.629**	.120	.075	.304
21. There is not a documented need.	.256	**.437**	.116	.082	-.007
27. The amount of research is overwhelming.	.048	.041	**.573**	.058	.098
28. You do not feel capable of evaluating.	.071	.183	**.566**	.094	.176
29. There is insufficient time in the course.	.064	.032	**.540**	.046	.089
7. You do not have time to read research.	.043	.057	**.539**	-.094	.145
13. You do not feel you have enough authority.	.139	-.040	**.423**	.177	-.068
15. You are isolated from knowledgeable colleagues.	.043	.143	**.377**	.347	.134
26. You are unwilling to change/try new ideas.	.007	.168	**.308**	.097	.046

Table 6 (continued)

18. Colleagues will not support.	-.038	-.002	.049	**.825**	.057
25. Other faculty are not supportive.	.161	-.013	.188	**.734**	-.040
19. Administration will not support.	-.013	.210	.060	**.569**	.101
3. Statistical analyses are not understandable.	.123	.140	.256	.059	**.711**
1. Research not readily available.	.137	.073	.115	.082	**.468**
4. The research is not relevant.	.200	.406	.076	-.003	**.447**

Note. Rotation converged in 6 iterations.

Table 7

Construct Reliability of the BARRIERS Scale

	Mean	SD	Alpha
Characteristics of the Innovation (nine items)	18.94	5.75	0.80
Characteristics of the Adopter (four items)	5.96	2.47	0.74
Characteristics of the Resources (seven items)	12.41	3.92	0.69
Characteristics of the Organization (three items)	4.77	2.29	0.74
Characteristics of the Communication (three items)	5.50	2.10	0.61

Importance of MI Guiding Principles.

These researcher-developed items were designed to assess respondents' agreement towards the importance of the five MI principles being present in the counseling relationship. Descriptive statistics for the MI principles indicate that counselor educators view the principles as being important with regards to the therapeutic alliance (see Table 8).

Factor analysis and reliability analysis were conducted to determine the subscales and internal consistency of the subscales. As suspected, the items were aligned in two factors: (a) direct principles, and (b) client-centered principles. Table 9 depicts the factor loading of the items from the current sample. The principles that were directive in nature (i.e. navigating resistance and identifying discrepancies) aligned under the first factor and the principles that were client-centered in nature (i.e. expressing empathy, supporting self-efficacy, and normalizing and exploring client ambivalence) aligned under the second factor. Direct principles explained 24.64% of the total variance, whereas client-centered principles explained 20.34% of the total variance. Therefore, the two factors accounted for 44.98% of the total variance.

Chronbach's alpha coefficients were analyzed to assess internal consistency for the two factors. Reliability analysis revealed scores of .65 to .63 for Directive principles and Client-centered principles, respectively (see Table 10). The overall analysis lends itself to provide support that these researcher-developed items were moderately valid and reliable.

Table 8

Descriptive Statistics for the Importance of MI Guiding Principles

	Minimum	Maximum	Mean	SD
Expressing empathy	3	5	4.92	.303
Identifying discrepancies	1	5	4.39	.654
Navigating resistance	1	5	4.32	.777
Normalizing and exploring ambivalence	2	5	4.49	.597
Supporting self-efficacy	2	5	4.74	.481

Table 9

Discriminate Validity of the MI Items

	Factor	
	1	2
3. Navigating client resistance.	**.784**	.130
2. Identifying discrepancies.	**.582**	.196
5. Supporting self-efficacy	.197	**.659**
4. Normalizing and exploring client ambivalence.	.484	**.560**
1. Expressing empathy and respect towards the client.	.072	**.462**

Note. Rotation converged in 3 iterations.

Table 10

Construct Reliability of the MI Factors

	Mean	SD	Alpha
Directive principles (two items)	8.71	1.23	0.65
Client-centered principles (three items)	14.15	1.07	0.63

Data Analysis Results

This study comprised four research questions. Multivariate analyses of variance (MANOVAs) were computed to analyze the data for the first two research questions, whereas linear regressions were utilized to compute the data for the last two research questions. Data was inspected for assumptions of independence, normality, and homogeneity. Independence was met

given that respondent responses were uncorrelated with the responses from other respondents due to the design of the data collection procedure (Fraenkel & Wallen, 2006). Univariate tests of normality indicate that normal distribution was assumed with regards to the dependent variables (i.e. subscales for the EBPAS and BARRIERS Scale). Lack of homogeneity of variance on some of the analyses was the primary concern of this study. Although a transformation of data was conducted in an attempt to equalize the variance, transformed data only served to further complicate matters. As such, analysis for this study used raw data as opposed to transformed data. Each research question and the resulting data are presented below.

Research Question One

The purpose of the first research question was to determine the difference in attitude towards adopting EBPs (as measured by the four subscales of the EBPAS) among counselor educators with respect to specific individual factors (e.g., specialized training in evidence-based practices [yes/no], years of professoriate experience [less than 10 years/10 or more years], and primary counselor education focus [clinical/vocational]). Table 11 shows the means and standard deviations for individual factors and the four subscales of the EBPAS (Requirements, Openness, Appeal, and Divergence).

Table 11

Means and Standard Deviations for Individual Factors (specialized training, years of

professoriate experience, and counselor education focus) and the EBPAS Subscales

EBPAS Subscale	Specialized Training	n	M	SD
Requirements	Yes	201	7.14	3.028
	No	67	6.43	3.368
Openness	Yes	201	11.12	2.583
	No	67	10.48	3.505
Appeal	Yes	201	9.08	3.019
	No	67	8.42	3.100
Divergence	Yes	201	10.95	3.248
	No	67	10.28	3.793

EBPAS Subscale	Years of Experience	n	M	SD
Requirements	Less than 10 years	141	7.30	3.101
	10 or more years	117	6.59	3.063
Openness	Less than 10 years	141	11.18	2.931
	10 or more years	117	10.88	2.758
Appeal	Less than 10 years	141	9.09	2.993
	10 or more years	117	8.67	3.124
Divergence	Less than 10 years	141	11.01	3.277
	10 or more years	117	10.36	3.507

Table 11 (continued)

EBPAS Subscale	Counselor Education Focus	n	M	SD
Requirements	Clinical	180	6.71	3.221
	Vocational	83	7.60	2.917
Openness	Clinical	180	10.99	2.904
	Vocational	83	10.98	2.745
Appeal	Clinical	180	9.22	2.985
	Vocational	83	8.42	2.976
Divergence	Clinical	180	10.80	3.325
	Vocational	83	10.86	3.447

Research question 1 posited three hypothesis: (a) Hypothesis 1a speculated that counselor educators with formal training in evidence-based practices would score higher on the EPBAS when compared to counselor educators with no formal training in evidence-based practices; (b) Hypothesis 1b suggested that counselor educators with less than 10 years of professoriate experience in academia would score higher on the EBPAS when compared to counselor educators with 10 or more years of professoriate experience in academia; and (c) Hypothesis 1c speculated that counselor educators with a clinically focused professional identity would score higher on the EBPAS when compared to counselor educators with a vocationally focused professional identity. Despite violating the assumptions of equal variance, as indicated by Box's Test of Equality of Covariance Matrices ($p < .05$), Hair, Black, Babin, Anderson, and Tatham (2006) indicated that the robust nature of MANOVA allows for moderate deviations of assumptions. Thus, MANOVA was deemed a suitable procedure for analysis of data in this study since the assumptions of independence and normality were met.

Results from the MANOVA are indicated in Table 12. Differences in attitudes towards EBPs among counselor educators who obtained specialized training in EBPs were not statistically significant from counselor educators who did not obtain specialized training in EBPS, Wilks' $\lambda = .982$, $F(4, 241) = 1.135$, $p > .05$. Additionally, it was found that differences in attitudes towards EBPS among counselor educators who accumulated ten or more years of teaching experience were not statistically significant from counselor educators who accumulated less than ten years of teaching experience, Wilks' $\lambda = .977$, $F(4, 241) = 1.393$, $p > .05$. However, statistically significant differences did exist between counselor educators with a clinically focused professional identity and counselor educators with a vocationally focused professional identity, Wilks' $\lambda = .948$, $F(4, 241) = 3.321$, $p < .05$. The independent variable in the final hypothesis accounted for 5.2% (η^2) of the total variance in the multivariate scores. In regards to the individual factor of counselor education focus, post hoc one-way ANOVA indicated that significant differences existed for the mean scores of the requirements scale, $F(1, 244) = 6.405$, $p < .05$, and the appeal scale, $F(1, 244) = 3.933$, $p < .05$ (see Table 13).

Table 12

Multivariate Tests for Individual Factors and EBPAS

Individual Factors	Wilks' Lamda	F	df1	df2	p	Partial Eta Squared	Observed Power
Specialized EBP Training	.982	1.135	4.000	241.000	.341	.018	.355
Years of Professoriate Experience	.977	1.393	4.000	241.000	.237	.023	.431
Counselor Education Focus	.948	3.321	4.000	241.000	.011*	.052	.838

*$p < .05$

Table 13

Univariate Tests for Counselor Education Focus and EBPAS Subscales

EBPAS Subscales		df	*F*	*p*
Requirements	Contrast	1	6.405	.012*
	Error	244		
Openness	Contrast	1	.343	.559
	Error	244		
Appeal	Contrast	1	3.933	.048*
	Error	244		
Divergence	Contrast	1	.066	.797
	Error	244		

*p < .05

To determine which of the dependent variables contributed most to the underlying composite of counselor education focus, discriminant analyses were conducted as a follow-up procedure (see Table 14). The standardized canonical discriminant function weights suggested that responses to items within the requirements scale contributed most to the function. Indeed, the structure coefficient suggested that the requirements scale accounted for 42% $((-.648)^2 * 100))$ of the variance in the function, followed by the appeals scale (37%).

To more clearly determine where the difference exists between the two groups, a pairwise comparison of the group centroids was assessed between counselor educators with a clinical professional background and counselor educators with a vocational professional background (see Table 15). The values of the centroids indicated that counselor educators with a clinical background hold more positive attitudes towards EBPs when compared to counselor educators with a vocational background since the centroid for clinical counselor educators is greater than the centroid for vocational counselor educators.

Table 14

Coefficients for Counselor Education Focus and EBPAS Subscales

EBPAS Subscales	Canonical Discriminant Function Coefficients	Sturcture Matrix Coefficients
Requirements	-.885	-.648
Openness	.219	.606
Appeal	.700	-.037
Divergence	-.005	.010

Table 15

Group Centroids for Counselor Education Focus and EBPAS

Counselor Education Focus	Function
Clinical	.139
Vocational	-.301

Research Question Two

The purpose of the second research question was to determine the difference in perceived

barriers towards adopting EBPs into counselor education curricula (as measured by the five

subscales of the BARRIERS Scale) among counselor educators with respect to organizational

factors (i.e. type of program [masters only/doctorate granting], status of CACREP accreditation

[CACREP accredited/non-CACREP accredited], and faculty position [core faculty/noncore

faculty]). Table 16 shows the means and standard deviations for the organizational factors and

the five subscales of the BARRIERS Scale (i.e. Characteristics of the Innovation, Characteristics

of the Adopter, Characteristics of the Resources, Characteristics of the Organization, and

Characteristics of the Communication).

Table 16

Means and Standard Deviations for Organizational Factors (type of program, CACREP

accreditation status, and faculty position) and the BARRIERS Scale Subscales

BARRIERS Subscales	Type of Program	n	M	SD
Characteristics of the Innovation	Masters Only	166	17.81	6.185
	Doctorate Granting	90	20.20	5.338
Characteristics of the Adopter	Masters Only	166	5.75	2.403
	Doctorate Granting	90	6.12	2.816
Characteristics of the Resources	Masters Only	166	12.45	4.387
	Doctorate Granting	90	11.62	3.568
Characteristics of the Organization	Masters Only	166	4.69	2.507
	Doctorate Granting	90	4.52	2.105
Characteristics of the Communication	Masters Only	166	5.55	2.167
	Doctorate Granting	90	5.37	2.149

BARRIERS Subscales	Accreditation Status	n	M	SD
Characteristics of the Innovation	CACREP Accredited	162	19.59	5.689
	Non-CACREP accredited	98	16.85	6.302
Characteristics of the Adopter	CACREP Accredited	162	6.03	2.641
	Non-CACREP accredited	98	5.58	2.288
Characteristics of the Resources	CACREP Accredited	162	11.86	3.940
	Non-CACREP accredited	98	12.61	4.278
Characteristics of the Organization	CACREP Accredited	162	4.58	2.228
	Non-CACREP accredited	98	4.68	2.543
Characteristics of the Communication	CACREP Accredited	162	5.45	2.167
	Non-CACREP accredited	98	4.68	2.543

Table 16 (continued)

BARRIERS Subscales	Faculty Position	n	M	SD
Characteristics of the Innovation	Core	225	18.72	5.932
	Noncore	43	17.65	6.859
Characteristics of the Adopter	Core	225	5.83	2.477
	Noncore	43	6.23	2.835
Characteristics of the Resources	Core	225	12.08	3.964
	Noncore	43	12.79	4.877
Characteristics of the Organization	Core	225	4.53	2.234
	Noncore	43	5.35	2.869
Characteristics of the Communication	Core	225	5.44	2.129
	Noncore	43	5.49	2.097

Research question 2 posited three hypothesis: (a) Hypothesis 2a speculated that counselor educators who teach at doctorate granting programs will score lower on the BARRIERS Scale when compared to counselor educators who teach at masters only programs; (b) Hypothesis 2b suggested that counselor educators who teach at CACREP accredited programs will score lower on the BARRIERS Scale when compared to counselor educators who teach at non-CACREP accredited programs; and (c) Hypothesis 2c speculated that counselor educators who are employed as core faculty members will score lower on the BARRIERS Scale when compared to counselor educators who are employed as noncore faculty members. Box's Test of Equality of Covariance Matrices indicated that assumptions of equal variance were not violated ($p > .05$). Thus, MANOVA was deemed a suitable procedure for analysis of data in this study since the assumptions of independence and normality were met.

Results from the MANOVA (see Table 17) indicated that a significant difference existed between counselor educators who taught at masters only program and counselor educators who taught at doctoral granting programs with regards to perceived barriers towards the inclusion of EBPs in counselor education curricula, Wilks' $\lambda = .947$, $F(5, 244) = 2.754$, $p < .05$. The independent variable accounted for 5.5% (η^2) of the total variance in the multivariate scores. No statistically significant differences were found between counselor educators in CACREP accredited programs and counselor educators in non-CACREP accredited programs, Wilks' $\lambda = .977$, $F(5, 244) = 1.173$, $p > .05$. Additionally, no statistically significant differences were found between counselor educators who were employed as core faculty members and counselor educators were not employed as noncore faculty members, Wilks' $\lambda = .979$, $F(5, 244) = 1.050$, $p > .05$.

Table 17

Multivariate Tests for Organizational Factors and BARRIERS Scale

Organizational Factors	Wilks' Lamda	F	df1	df2	p	Partial Eta Squared	Observed Power
Program Type	.947	2.754	5.000	244.000	.019*	.053	.822
CACREP Status	.977	1.173	5.000	244.000	.323	.023	.414
Faculty Position	.979	1.050	5.000	244.000	.389	.021	.372

*$p < .05$

In regards to the organizational factor of program type, post hoc one-way ANOVA indicated that significant differences exist for the means scores of the characteristics of the innovation subscale, $F(1, 248) = 9.025$, $p < .05$, (see Table 18). To determine which of the dependent variables contributed most to the underlying composite, discriminant analyses were

conducted as follow-up procedures (see Table 19). The standardized canonical discriminant

function weights suggested that responses to items within the first factor of the BARRIERS

Scale contributed most to the function. Indeed, the structure coefficient suggested that

characteristics of the innovation accounted for 45.4% $((.674)^2 * 100)$ of the variance in the

function, followed by characteristics of the resources (11%), characteristics of the adopter (6%),

characteristics of the organization (2%), and characteristics of the communication (1%).

A pairwise comparison of the group centroids was assessed between doctorate granting

programs and master's only programs to determine where the difference existed between the two

groups (see Table 20). Since the value of the centroid for doctorate granting programs is greater

than that of masters only program, it may be deduced that counselor educators in doctoral

granting programs report greater barriers to the inclusion of EBPs in counselor education

curricula.

Table 18

Univariate Tests for Program Type and BARRIERS Scale Subscales

BARRIERS Scale Subscales		df	*F*	*p*
Characteristics of	Contrast	1	9.025	.003*
the Innovation	Error	248		
Characteristics of	Contrast	1	.612	.435
the Adopter	Error	248		
Characteristics of	Contrast	1	.447	.504
the Resources	Error	248		
Characteristics of	Contrast	1	.073	.787
the Organization	Error	248		
Characteristics of	Contrast	1	.136	.713
the Communication	Error	248		

*$p < .05$

Table 19

Coefficients for Program Type and BARRIERS Scale Subscales

BARRIERS Scale Subscales	Canonical Discriminant Function Coefficients	Sturcture Matrix Coefficients
Characteristics of the Innovation	1.078	.674
Characteristics of the Adopter	.035	-.335
Characteristics of the Resources	-.575	.240
Characteristics of the Organization	-.110	-.140
Characteristics of the Communication	-.423	-.119

Table 20

Group Centroids for Program Type and BARRIERS Scale

Program Type	Function
Masters Only	-.211
Doctorate Granting	.390

Research Question Three

The purpose of the third research question was to determine if attitude towards EBPs, as measured by the total score of the EBPAS (independent variables), influenced perceived barriers to the inclusion of EBPs in counselor education curricula, as measured by the total score of the BARRIERS Scale (dependent variable). The hypothesis posited that a negative correlation would exist between counselor educators' attitudes towards EBPs and the extent to which situations were perceived as barriers with regards to the inclusion of EBPs in counselor education curricula. Inspection of the plot of standardized residuals against the predicted values revealed a

linear trend and homoscedasticity. Moreover, the distribution of the standardized errors

sufficiently approximated normality; thus, the assumptions of statistical analysis were met.

Overall, the linear composite of the EBPAS total score predicted (or explained) 3.0% of

the variation in the BARRIERS Scale total score, $F(1, 267) = 8.172$, $p < .05$ (see Table 21). The

b weight for the total score of the EBPAS did not include zero as a probable value, indicating

that this estimate is statistically significant (see Table 22). Closer inspection of the b weight

suggested that with every unit increase in the EBPAS, a .251 unit decrease was observable in the

total score of the BARRIERS Scale.

Table 21

Model Summary of EBPAS Total Score on the BARRIERS Scale Total Score

Model	Sum of Squares	df	Mean Square	*F*	*p*	R	R Square	Adjusted R Square
Regression	1175.022	1	1175.022	8.172	.005*	.172	.030	.026
Residual	38389.543	267	143.781					
Total	39564.565	268						

*$p < .05$

Table 22

Coefficients of EBPAS Total Score on BARRIERS Scale Total Score

Model			Unstandardized Coefficients		Standardized Coefficients	95% Confidence Interval for B	
	p	t	B	Std. Error	Beta	Lower Bound	Upper Bound
Constant	.000	16.587	56.066	3.380		49.411	62.721
EBPAS Total Score	.005	-2.86	-.251	.088	-.172	-.423	-.078

Research Question Four

The purpose of the fourth research question was to determine whether reported levels of agreement to the presence of MI guiding principles in the counseling relationship, as indicated by the total score of the MI guiding principle items (independent variable) influenced counselor educators' attitudes towards EBPs, as measured by EBPAS total score (dependent variable). The hypothesis posited that a positive correlation would exist between counselor educators' reported levels of agreement towards the inclusion of MI principles in the counseling relationship and their attitude towards EBPs. Inspection of the plot of standardized residuals against the predicted values revealed a linear trend and homoscedasticity. Moreover, the distribution of the standardized errors sufficiently approximated normality; thus, the assumptions of statistical analysis were met.

Overall, the linear composite regarding the importance of MI principles being present in the counseling relationship predicted 7.4% of the variation in the EBPAS total score, $F(1, 267) = 21.362$, $p < .001$ (see Table 23). The b weight for the MI principles score did not include zero as a probable value, indicating that this estimate is statistically significant (see Table 24). Closer inspection of the b weight suggested that with every unit increase in this total score, a .670 unit increase was observable in the total score of EBPAS.

Table 23

Model Summary of MI Principles on the EBPAS Total Score

Model	Sum of Squares	df	Mean Square	F	p	R	R Square	Adjusted R Square
Regression	1386.130	1	1386.130	21.362	.000*	.272	.074	.071
Residual	17325.320	267	64.889					
Total	18711.450	268						

*p < .05

Table 24

Coefficients for MI Principles Total Score

Model			Unstandardized Coefficients		Standardized Coefficients	95% Confidence Interval for B	
	p	t	B	Std. Error	Beta	Lower Bound	Upper Bound
Constant	.000	6.847	22.577	3.297		16.084	29.069
MI Importance Total	.000	4.622	.670	.145	.272	.384	.955

Summary

This chapter presented the validity and reliability scores for the instruments utilized in this study. Furthermore, results of the data analyses procedures, which included MANOVAs, linear regressions, and post hoc analyses, were presented. The following chapter will continue with a discussion of the results, limitations to the study, and implications for counselor education, counseling practice, and future research.

CHAPTER FIVE: DISCUSSION

The primary objective for this chapter is to discuss the results and explain the implications of the study by integrating content from the current literature and research. To set the context, the first section will present an overview of the study, followed by a description of the limitations of the study, and then a summary and interpretation of the analysis. Finally, the last section will highlight the implications of the study for counselor education and practice, as well as offer suggestions for future research.

Overview

The specific purpose of this study was to examine the influence of individual factors (i.e. evidence-based practice (EBP) training, counselor education experience, area of focus) on counselor educators' attitudes, identify the effect of organizational factors (i.e. doctoral-granting or master's only counselor education program, CACREP accreditation status, core or noncore faculty position) on perceived barriers, and ascertain the degree of influence to which reported levels of agreement towards the guiding principles of motivational interviewing (MI) being present in the counseling relationship have on counselor educators' attitudes towards EBPs. The goals of this study were to: (a) extend counselor education literature by providing the first assessment of counselor educators' attitudes towards the EBP movement, and (b) assess whether MI could promote the EBP movement in counselor education.

According to Rogers (2003), individual and organizational factors regulate the rate of diffusion and adoption of innovations. As such, this study utilized measures that captured one's attitude (EBPAS) and perceived barriers (BARRIERS Scale) towards EBPs. Furthermore,

researcher-developed items were used to assess respondents' perceived degree of importance regarding the relevancy of MI principles in the counseling relationship.

Six hundred seventy-five counselor educators were invited to participate in this study, and of those invited, almost 40% responded to the invitation. The majority of the participants identified themselves as female, Caucasian, and having 16 or more years of clinical experience. In terms of counselor education experience, the majority of the respondents indicated a clinical focus and a core faculty position. Prior to summarizing the findings and results of this study, the following section will consider the study's limitations in order to provide a context in which to better understand the interpretation of the results.

Potential Limitations

Although the overall intent of this research was to take a step toward understanding counselor educators' attitudes towards EBPs in counselor education while assessing their adherence to MI principles, it is not without limitations. The limitations related to the research methods, the sample, and the research design that potentially impacted the results of this study are presented below.

Limitations Related to the Research Methods

One of the main limitations of the research method concerns the use of survey research. Arguments can be made regarding the effect of survey research on generalizabilty due to nonresponse and social desirability (Fraenkl & Wallen, 2006). Nonresponse can become problematic for two main reasons. First, it is difficult to surmise the basis for unreturned surveys.

Secondly, and potentially more troublesome, studies have shown that individuals who voluntarily participate in survey research often vary in characteristics from those individuals within the target population who choose not to participate (Fox, Robinson, & Broardley, 1998). In an effort to increase response rate, this study utilized Dillman's (2007) Tailored Design Approach, which resulted in a 39% response rate. Although a response rate at this percentage is considered above average for electronic surveys (Shannon & Bradshaw, 2002), nonresponse was still an issue since all that can be known for sure is that the survey was never submitted. In other words, determining the reasons behind a potential respondent not responding to the survey is virtually impossible with this format.

In terms of the second aspect of generalizabilty, social desirability could potentially threaten the validity of the study (Fraenkel & Wallen, 2006). Since this study relied solely on self-report, the results are naturally limited to the degree of honesty expressed by the participants (Dillman, 2007). As such, concerns exist regarding the possibility of respondents providing responses that seem socially acceptable, as opposed to providing genuine responses. Thus, social desirability may have impacted both the demographic questionnaire and the dependent measures.

Another aspect of the research design is the study's inability to account for variability in environments and/or equipment. For instance, room temperature, time of day, and speed of Internet connection could have impacted the testing conditions. Therefore, it is plausible that external variables could affect the results of the study. The next section will specifically address issues related to the sample of the study.

Limitations Related to the Sample

Additional limitations of this study are related to the sample. First, the researcher chose to use a convenience sample. In order to obtain a cross section of counselor educators, this study sampled counselor educators who were members of the Association of Counselor Education and Supervision (ACES), the national organization for counselor educators. Past studies have indicated that ACES is a representative sample of the population of counselor educators (Hill, 2002). In fact, demographic characteristics found in the current study compared well with demographic characteristics found in a study conducted by Downs (2003), which consisted of 200 counselor educators, of which only 4% reported being members of ACES. For instance, in Downs' sample, 24% of counselor educators identified their primary counseling theory as cognitive in nature, followed by person-centered (8.3%), systems-oriented (6.9%), existential (6.9%) solution-oriented (4.2%) and psychoanalytic (1.4%) Similarly, this study found that 26% of counselor educators identified their primary counseling theory as cognitive in nature, followed by person-centered (13%), systems-oriented (11%), existential (11%) solution-oriented (10%) and psychoanalytic (1%).

In terms of gender, ethnicity and experience as a counselor educator, the current study revealed similar demographic results to a previous study that surveyed counselor educators in ACES. Kahn and Kahn (2001) found that counselor educators from ACES were primarily: (a) female (53.5%), (b) Caucasian (86%), and counselor educators with less than 10 years of professoriate experience (60%). Although the demographic findings of the current study are similar to previous studies that were conducted with counselor educators in ACES, it may be presumptive to indicate that ACES is a representative sample of counselor education as a whole.

Findings from several previous studies suggest that the demographic data collected in the current study do not match well with demographic data collected from counselor educators on a national level in which the sample was not exclusive to the ACES population. For example, Hill (2002) found that 20% of her sample had 10 or less years of professoriate experience; whereas the current study found that 52.4% of the respondents reported having 10 or less years of professoriate experience. Furthermore, in another national study, Schweiger, Henderson, Clawson, Collins, and Nuckolls (2008) identified that out of 1,781 counselor educators 77% were core faculty members and 17% were noncore faculty members. In the current study, 92% of the respondents identified as core faculty and 7% identified as noncore faculty. As such, it may be presumptive to indicate that the utilization of this convenience sample accurately represents the target population. In other words, a case could be made that the use of the ACES membership may not reflect an accurate composition of counselor educators, and thus, may effect the generalizability of this study.

Another limitation to the sample concerns the difficulty to determine whether or not the intended participants completed the surveys. In other words, it is plausible that surveys were completed and submitted by the participants' graduate assistants, family members or friends. Additionally, the electronic format utilized in the current study may have impacted the results. For example, the use of an electronic survey automatically excludes individuals that only respond to traditional, paper-and-pencil format. Furthermore, individuals without access to the Internet were not sampled. Therefore, in all likelihood, coverage bias was a factor in the current study. The following section will address issues concerning the research design.

Limitations Related to the Research Design

There were several potential limitations related to the overall design of the study. The first issue stems from the factor analysis of the BARRIERS Scale being dissimilar to the factor analysis of the original and subsequent studies. Consequently, three items were not retained for data analysis in this study. The variability in the analyses of the instrument may indicate that the BARRIERS scale was not an appropriate measure for this population; thus, indicating the potential need to develop an assessment that is tailored for counselor educators.

Limitations to the demographic questionnaire also existed. Specifically, two issues were commented by a number of respondents. First, respondents' theoretical orientation was a forced-choice item. In other words, respondents were asked to indicate their *primary* counseling orientation, and as such, *eclectic* or *integrated* approaches were not included in the list of possible responses. Some respondents indicated, per feedback via email, their displeasure and discomfort with addressing this item as a forced-choice item. A second potentially problematic issue regarding the demographic questionnaire concerned the fact that *rehabilitation counselors* were not included as one of the responses to the professional identity item. The potential responses were chosen based on those counseling professions that are recognized by CACREP. Again, a number of respondents indicated that this item was not addressed in their survey since their professional identity or *other* was not a possible response. Since these items did not capture, or at the very least may not have accurately captured, the essence of the responding sample, it could be posited that the analyzed data may not accurately portray the overall ACES population.

Another aspect of the analyzed data that poses a concern relates to the lack of variance in mean scores for the dependent variables. Although there were several significant findings, the

lack of variability between means were often found regardless of independent grouping, which

resulted in small effect sizes. Additionally, there was a lack of variability related to the MI items.

However, it does appear that MI principles were indeed important to the counseling relationship,

since item means ranged from 4.32 to 4.92 on 5-point scale. Thus, homogeneity of variance may

have a limiting effect in this study, and as such, indicates that those who chose to participate may

have done so as a result of their interest in the subject at hand.

Although the abovementioned issues related to the research methods, sample, and

research design indicate that the findings should be interpreted with caution and diligence, it

should be noted that the benefits of the current study outweigh the limitations. To date, despite a

comprehensive review of the literature, no other studies were found that addressed the relevance

of EBPs in counselor education. As such, the current study marks the first authentic attempt to

assess counselor educators' attitudes towards EBPs. The following section will provide a

detailed discussion of the results.

Summary and Interpretation of Results

The following section will discuss each research question in order to explore the results

and draw conclusions from the analyzed data and compare/contrast it with the current counselor

education literature.

Research Question One

The first research question in this study focused on finding the effect of individual factors

(i.e. specialized training in EBPs, years of professoriate experience, and primary counselor

education focus) on counselor educators' attitudes towards EBPs (as measured by the four subscales of the EBPAS). In accordance with the literature, the hypotheses indicated that counselor educators with specialized training in EBPs, and/or those who possessed fewer than ten years of professoriate experience, and/or those who held clinical backgrounds would score higher on the EBPAS when compared to counselor educators who did not have any EBP training, and/or who had ten or more years of professoriate experience, and/or who possessed a vocationally-focused background.

Interestingly, this study did not result in any significant interaction effects among the independent variables. More specifically, the analyses revealed that neither specialized training in EBPs nor years of professoriate experience resulted in significant differences. Typically, research indicates that training in EBPs does result in positive attitudes towards EBPs (Iles & Davidson, 2006). However, it appears that EBP-training makes no difference in EBP attitudes for the sample utilized in the current study. This finding is consistent with results produced by Hamm (2008) who posited that workshop and conference training may oftentimes serve as an introduction to EBPs, but it is possible that this type of training does not transition into implementation. Thus, the differences in this study may be attributed to the type of training acquired for those respondents that indicated having specialized EBP training.

In terms of years of experience, the current study found that time in the professoriate does not make a difference with regards to EBP-attitudes. Although this finding is consistent with Hamm (2008) and Iles and Davidson (2006) (which indicate that time in the helping profession does not affect EBP-attitude), other studies do indicate the opposite (e.g., Aarons, 2004; McGuire, 2006). The conclusions drawn from past studies suggested that more recent graduates

(i.e. newer faculty) were more apt to hold favorable attitudes towards EBPs, as EBPs are a new concept in higher education (Hamm, 2008). The difference in the current sample may be due to the implication that the counseling culture holds a general attitude that practicing EBPs is not worthwhile (Sexton, 2000); thus, newer counselor educators may ascribe to similar beliefs as seasoned counselor educators.

Although significance was not found with regards to the first two individual factors, the data analysis did reveal a significant difference between those counselor educators with a clinical focus and those with a vocational focus. A closer look at the data suggests that counselor educators with a clinical focus would be more likely to adopt EBPs if it was required by an organization and if it was appealing. Specifically, the items of the *requirements* subscale of the EBPAS asked respondents to rate the extent to which they would adopt a new practice if it was required by an agency, supervisor, or state; while items on the *appeal* subscale inquired about the likelihood that respondents would adopt EBPs if it was intuitively appealing, made sense, and was being used by colleagues (Aarons, 2004). This finding is of interest for counselor educators who teach in CACREP-accredited programs as the 2009 CACREP Standards (2008) indicate that counselor educators are now responsible to expose EBPs to all student-counselors. Thus, it seems that, among the individual factors assessed in the current study, counselor education focus produced the greatest variability due to the potential influence of how others view the importance of EBPs.

Research Question Two

The second research question focused on finding the effect of organizational factors (i.e. type of program, status of CACREP accreditation, and faculty position) on perceived barriers to the inclusion of EBPs in counselor education curricula (as measured by the five subscales of the BARRIERS Scale). Hypotheses indicated that those counselor educators in doctoral granting institutions, and/or in CACREP accredited programs, and/or who were core faculty would perceive less barriers to the incorporation of EBPs as opposed to those counselor educators in masters only programs, and/or in non-CACREP accredited programs, and/or who were noncore faculty.

Again, analyses indicated no significant interaction effects among the independent variables. Furthermore, the study revealed that neither CACREP accreditation nor faculty position resulted in any significant differences. A potential reason for the lack of significance with regard to CACREP status may be due the fact that the new standards just went into effect when respondents were invited to participate in the current study. Nevertheless, the findings indicate that differences with regards to situations being perceived as barriers to the incorporation of EBPs in counselor education curricula do not exist between counselor educators in ACES who are employed in CACREP accredited programs and those who are employed in non-CACREP accredited programs.

In terms of faculty position, a lack of significance may be accounted for by the overwhelming number of core faculty members who responded to the survey as compared to noncore faculty members. Perhaps, if the samples were more proportionate, differences between the two groups may have been detected. However, the high response rate of core faculty

members is representative of counselor educators in ACES (Kahn & Kahn, 2001). Thus, the findings suggest that resistance to the inclusion of EBPs in counselor education curricula is common among counselor educators in ACES.

Of the three independent variables for this research question, data analysis did reveal that significant differences did exist with regards to program type. Although literature stipulates that faculty members in doctorate granting programs are more apt to incorporating EBPs in the curricula (Woody et al., 2006), this study indicated that counselor educators in masters only programs perceived less barriers to the incorporation of EBP in their counselor education curricula. In fact, upon closer inspection of the data, it was found that counselor educators teaching at doctorate granting programs scored higher on the characteristics of the innovation subscale of the BARRIERS Scale. This finding suggests that counselor educators in doctorate granting programs perceived more barriers to the inclusion of EBPs because they tended to be more critical of the research and EBPs as opposed to those counselor educators who taught at master's only program. In other words, it is plausible that counselor educators at programs where research is not the main priority may view research for the practicality of the interventions instead of critically assessing the research findings. Thus, it seems that, among the organizational factors assessed in the current study, program type produced the greatest variability due to the potential influence of critically assessing research findings.

Research Question Three

The intent of the third research question was to investigate whether counselor educators' attitudes towards EBPs influenced their perceived barriers to the inclusion of EBPs in the

counselor education curricula. The hypothesis stated that a negative correlation would exist between the independent variable (i.e. attitudes towards EBPs, as measured by the total score of the EBPAS) and the dependent variable (i.e. perceived barriers, as measured by the total score of the BARRIERS Scale). Upon data analysis, the emergence of a negative correlation was observed between the two variables. This finding suggests that it is likely that when counselor educators hold positive attitudes towards EBPs they then perceive less barriers to the inclusion of EBPs in counselor education curricula. Similarly, recent literature indicates that when practitioners hold positive attitudes regarding EBPs then the likelihood of using EBPs also increases (Hamm, 2008). However, it should be noted that studies have been conducted in the recent past, which dispute the current finding. For example, Rubin and Parrish (2007) and Woody and colleagues (2006) found that most faculty members in social work education supported EBPs, but they did not include EBPs in the curriculum. Thus, attitude towards EBPs, though significant, may not be a powerful predictor of EBP incorporation in counselor education curricula.

Research Question Four

The fourth research question of this study was also exploratory in nature, but focused on assessing the relationship between MI's core principles and counselor educators' attitudes towards EBPs. The hypothesis posited that a positive correlation would exist between counselor educators' reported levels of agreement towards the inclusion of MI principles in the counseling relationship (as measured by the total score for the MI guiding principle items) and their attitude

towards EBPs (as measured by the total score for the EBPAS). Upon data analysis, a positive correlation was found between the independent variable and the dependent variable.

The findings of this final research question can be supported by a study conducted by Forman, Bovasso, and Woody (2001), which indicated that providers who supported the use of MI held favorable attitudes towards the use of research-based innovations. Furthermore, Aarons and Sawitsky (2006) suggested that the incorporation of innovation is met with greater resistance when the innovation is complex as opposed to those innovations that are brief. Additionally, Lehman, Greener and Simpson (2002) found that innovations which match the mission of a particular organization are much more likely to be adopted and disseminated. The results from this study indicate that the majority of counselor educators believe the guiding principles of MI, which are in and of themselves a part of a brief intervention, are necessary components of the counseling relationship. Thus, it may be plausible that MI is an innovation that could be adopted as an EBP in counselor education with little resistance.

Overall, the abovementioned findings suggest that counselor education focus and program type result in the greatest variability with regards to the individual and organizational factors, respectively. Furthermore, it seems that counselor educators perceived the MI principles to be extremely important in the counseling relationship and that this importance did have an effect on EBP-attitude. The following section will provide a discussion regarding the implications of the current findings.

Implications for Counselor Preparation

This study yielded several implications related to the counseling profession. The following sections break these inferences down into implications for education, practice, and research.

Implications for Education

Just within the past decade, studies have begun to address the incorporation of EBPs in the graduate curricula of the helping professions (Howard et al., 2003; Woody et al., 2006). In fact, Jenson (2007) speculated that this push for EBP training in the helping profession may be indicative of a catalyst for educational reform in response to the influence of managed healthcare. In order to contribute to the growing integration of EBP in the helping profession, this study investigated counselor educators' attitudes towards the EBP movement.

Findings in this study indicate a need for policy adherence in order for counselor educators to embrace the EBP movement. Both the 2009 CACREP Standards (2008) and the ACA Code of Ethics (2005) have addressed the ethical responsibilities of counselor educators training student-counselors in EBPs. Therefore, a shift in counselor education pedagogy may be necessary in order to encapsulate the increasing need for evidence.

Although researchers and policymaker are calling for the incorporation of EBPs in various aspects of the counseling profession (ACA, 2005; CACREP, 2008; Sexton, 2000), more attention must be given to counselor educators' understanding of EBPs. One implication found in the current study is that counselor educators currently hold some degree of resistance towards the incorporation of EBPs in counselor education curricula, which may indicate that counselor

educators may not be equipped to disseminate information concerning EBPs. Therefore, it would be relevant to develop a training program to educate counselor educators on the most effective strategies to infuse EBPs into their current curricula. This type of training could ensure that student-counselors receive the most accurate and up-to-date education concerning effective interventions for their future clients.

The findings of this research indicate that counselor educators could potentially find MI as an EBP that is congruent to the developmental philosophy of the counseling profession. However, it is unclear how often, or even if, student-counselors are learning this approach. One fact seems to be true, in that, counseling theory textbooks often times do not discuss MI. This author conducted a physical examination of the most popular theories textbooks distributed by two of the leading publishers in counselor education. Of the reviewed textbooks, only two addressed MI. Furthermore, the two textbooks briefly discussed MI in two to four paragraphs. This finding is in direct contrast with the findings of this study, which suggest that MI-principles are crucial aspects of the counseling relationship. Therefore, the implication could be made that student-counselors would benefit from learning MI as an EBP. The ensuing section will infer how findings from the current study could benefit student-counselors and clients.

Implications for Practice

In accordance with policy adherence, it is noteworthy that policy formation in the social sciences is generally a reaction to client needs (Hamm, 2008). As such, the incorporation of EBPs should not be viewed as an academic exercise; rather, teaching EBPs should be seen as a means to improve the outcomes of clients and the health of the overall population (Norcross et

al., 2008). In fact, some of the respondents of the current study indicated this sentiment after completing the survey via emails. For example, one respondent reported:

> Personally, I think evidenced based practice is important as many counselors seem to practice whatever they feel is appropriate and struggle to offer sufficient justification for their interventions. It is not uncommon to see workshops that offer training in some "new" approach that has not had sufficient empirical scrutiny…Despite the obvious challenges, the process of exploring these approaches could yield valuable benefits for clients.

Another respondent indicated:

> Your proposed study of counselor educator attitudes towards adoption of evidence-based practices in counselor education sounds as if it will yield some important and practical information. I've thought about the topic of how to improve counselor education curricula so much since I've gone back into private practice.

Yet another counselor educator responded to the potential role of EBPs in school counseling:

> I certainly know the importance of school counselors knowing how to quantify and show evidence of our value in the educational process, especially using the ASCA model. I teach school counselors and I teach evidence based practice(s), but within the context of implementing a comprehensive school counseling program.

These unsolicited responses to the current study could indicate the need to infuse EBPs throughout the core counseling courses in counselor education curricula in order to produce students that possess the ability to properly and accurately assess potential client outcomes based on research.

Collins and colleagues (2007) contended that the incorporation of EBPs in training curricula requires three basic components: research evidence, clinical expertise, and patient values. Specifically, education should ensure that professional counselors exit counselor education programs with the skills necessary to critically assess research while taking into account patient values, and then implement a desired course of treatment. Thus, by teaching EBPs, counselor educators would provide their students with the tools necessary to establish a successful career as a counselor within the confinements of the managed healthcare system.

Though the inclusion of EBPs in counselor education curricula would be indicative of counselor educators embracing the EBP movement, Margison (2001), indicated that most evidence-based models do not encapsulate the depth and breadth of the therapeutic alliance. As such, the research-gap continues to grow in the counseling profession. Nonetheless, providing services that have proven to be effective with a litany and variety of individuals should be an important aspect of the counseling profession. In addition to finding a significant relationship between MI principles and attitudes towards EBPs, findings from the current study also indicated that counselor educators fully recognize the importance of the MI guiding principles being present in the therapeutic setting. In accordance with Aarons' (2004) understanding of disseminating and implementing innovations, this study concluded that the guiding principles of MI, which form an effective and efficacious intervention, are regarded as being highly important and necessary to the counseling relationship. Thus, counselor educators could potentially adopt the innovation of teaching MI as an EBP in their curricula, which could promote the welfare of the clients to whom student-counselors would provide services. The following section will address how findings from the current study lend themselves for future research.

Implications for Counseling Research

The current study yields several areas for future counseling research. First, this study should be replicated with a larger and varied sample. Research issues caused by the lack of variance in the current sample could be addressed by assessing EBP-attitudes of counselor educators in other organizations. For example, counselor educators who belong to the American Psychological Association may hold varying attitudes from counselor educators who belong the Association of Counselor Education and Supervision. As such, this may result in greater variance and potentially a greater understanding of the EBP movement in counselor education.

Another area of research would involve an investigation of the current dissemination rate of EBPs in counselor education curricula. In fact, Norcross, Hedges, and Prochaska (2002) surveyed a panel of 62 mental health professionals in order to identify possible changes that may occur to psychotherapy in the upcoming decade: the expansion of EBPs was found to be the scenario that elicited the most concern. As such, there exists a need to effectively disseminate EBPs in counselor education programs.

An additional area of interest would be to assess how willing counselor educators are to formally include MI in their curricula. A solid understanding of where counselor education stands in its dissemination of MI could potentially be used as a recruiting tool. In accordance with the dissemination of MI, further research should be conducted on the validity and reliability of the MI-items utilized in this study. Expanding on the current items could result in the development of a scale, and potentially an assessment instrument, which could be used for training and disseminating purposes.

In addition to the abovementioned areas for future research, it would be of interest to acquire data from counselor educators utilizing a qualitative approach to data collection. For example, analyzing categories and themes that emerge from counselor educators' responses could possibly provide rich insight into the challenges and barriers to the inclusion of EBPs in their teachings. Thus, a qualitative study may bring about further gains in knowledge regarding counselor education's stance within the EBP movement.

Summary

The objective of this chapter was to interpret the results and provide implications for the current study. However, limitations of the research design, sample, and research methods were also addressed in order to provide to a context from which to interpret the results. Following the interpretation of the results, the current chapter discussed the implications for education, practice, and research derived from the findings and limitations. The following section will summarize the content and findings of the current study.

CONCLUSION

Within the past decade the helping profession has experienced a strong push for embracing the evidence-based practice (EBP) movement. To date, counselor education has trailed the other fields in the helping profession with regards to accepting this movement. However, counselor educators are ethically obligated to provide their students with the most accurate research and knowledge in order to promote, as best as possible, positive client outcomes. In fact, Sexton (2000) claimed that counselor educators are tasked with two overall goals. First, counselor educators must provide student-counselors with the most current knowledge regarding the most advanced change principles. Second, counselor educators are responsible for producing competent student-counselors who can adjust well to the professional environment.

In terms of the professional environment, an increasing number of counselors are challenged to provide EBPs as a result of managed healthcare's effect on the profession (Rosenberg & Wright, 1997). For instance, Sheperis and colleagues (2009) indicated that managed care not only restricts the number of sessions in which counselors can provide services, but often will only reimburse for EBPs. As such, counselor educators have an ethical responsibility to train student-counselors in interventions that would promote their success in the profession.

The 2005 ACA Code of Ethics and the 2009 CACREP Standards, both, call for an increase in the inclusion of EBPs in the counseling profession. Currently, the counselor education literature lacks empirical research supporting counselor educators' intent to teach empirically founded brief interventions (Sexton, 2000; Wester, 2007). Despite the ethical

responsibility of teaching student-counselors EBPs, counselor educators typically perceive that EBPs reduce counseling to the medical model and, thus, typically hold negative attitudes towards EBPs (Wampold, Ahn, & Coleman, 2001).

Motivational interviewing (MI) represents an EBP that matches the philosophical approach of the counseling profession (Moyers & Rollnick, 2002). In addition to acquiring empirical support from a plethora of randomly controlled clinical trials, the guiding principles of MI emphasize the core counseling skills valued by the counseling profession (Britt et al., 2003; Carroll et al., 2006; Dunn et al., 2001; Rubak et al., 2005). Thus, MI offers counselor educators an EBP that parallels the foundation of the counseling profession in philosophy and in skills and has been proven to be effective for a range of client populations.

Despite the match between MI and the counseling profession, the lack of recognition concerning this approach in the counseling literature suggests that MI may not widely be well-known in the counseling profession. Additionally, the literature indicates a growing gap between the counseling profession and EBPs, as many counselors, including counselor educators, are hesitant towards accepting the EBP movement (Chambless & Ollendick, 2001; Hayes et al., 2002). Unfortunately, Calhoun and colleagues (1998) found that faculty attitudes toward EBPs were the primary factor in determining how and if EBPs were diffused and adopted in the curriculum.

Rogers' (2003) diffusion of innovation theory describes the process in which innovations are diffused and adopted within networks. Specifically, Rogers indicated that the adoption of innovations was influenced by individual factors, such as training and experience, as well as organizational factors, such as commitment to a governing association. As such, the overall

intention for this study was to assess counselor educators' attitudes and perceived barriers towards the inclusion of EBPs in counselor education curricula.

The specific purpose of this study was to examine the influence of individual factors on counselor educators' attitudes, and identify the effect of organizational factors on perceived barriers to the incorporation of the EBPs in counselor education curricula. Additionally, this study aimed to assess whether counselor educators' level of agreement towards the presence of MI principles in the counseling relationship impacted attitudes towards EBPs. As such, counselor educators from the Association of Counselor Education and Supervision were invited to participate in the study.

Two hundred sixty nine counselor educators (39.8% response rate) responded to the electronic survey, which consisted of the Evidence-Based Practice Attitude Scale (Aarons, 2004), the BARRIERS Scale (Funk et al., 1991), and a demographic questionnaire. Four questions were researched and analyzed to determine: (a) the difference in attitude towards adopting EBPs among counselor educators with respect to specific individual factors (i.e. specialized training in evidence-based practices, years of professoriate experience, and primary counselor education focus); (b) the difference in perceived barriers towards adopting EBPs into counselor education curricula among counselor educators with respect to organizational factors (i.e. type of program, status of CACREP accreditation, and faculty position); (c) the influence of EBP attitude on perceived barriers to the inclusion of EBPs in counselor education curricula; and (d) the correlation between counselor educators' reported level of agreement towards MI principles' presence in the counseling relationship and their attitude towards EBPs.

Findings suggested that neither specialized training in EBPs nor years of professoriate experience significantly impacted counselor educators' attitudes towards EBPs. However, data analysis did reveal that clinically-focused counselor educators were more likely to adopt EBPs when compared to vocationally-focused counselor educators. In terms of organizational factors influence on perceived barriers to the inclusion of EBPs in counselor education curricula, analyses did not reveal any significant differences between counselor educators who were employed in CACREP accredited programs and counselor educators who were employed in non-CACREP accredited programs; nor were any significant differences revealed between core faculty and noncore faculty. Although, analysis did reveal that counselor educators in masters only programs perceived significantly less barriers to the inclusion of EBPs than did counselor educators in doctorate granting programs. In terms of regression analyses, results suggested a negative correlation between attitude towards EBPs and barriers towards the inclusion of EBPs in counselor education curricula, and a positive correlation between counselor educators' agreement towards the inclusion of MI principles in the counseling relationship and their attitudes towards EBPs.

Conclusions drawn from the study do not fully support the notion that counselor educators hold a negative attitude towards the EBP movement as suggested by pervious studies (Chambless & Ollendick, 2001; Hayes et al., 2002; Sexton, 2000). Although barriers to the inclusion of EBPs in counselor education curricula were recognized, findings indicated that counselor educators were willing to adopt EBPs. Furthermore, it seems that counselor educators perceived the MI principles to be extremely important in the counseling relationship. Thus, the

implication can be made that MI represents an innovation that could potentially be diffused

within counselor education curricula.

APPENDIX A:
UNIVERSITY OF CENTRAL FLORIDA IRB OUTCOME LETTER

University of Central Florida Institutional Review Board Office of Research & Commercialization 12201 Research Parkway, Suite 501 Orlando, Florida 32826-3246 Telephone: 407-823-2901, 407-882-2012 or 407-882-2276 www.research.ucf.edu/compliance/irb.html

Notice of Exempt Review Status

From: **UCF Institutional Review Board FWA00000351, Exp. 10/8/11, IRB00001138**

To: **Samir H. Patel**

Date: **August 10, 2009**

IRB Number: **SBE-09-06371**

Study Title: **An Investigation of Counselor Educator Attitudes towards Evidence-Based Practices and Perceived Barriers to the Incorporation of Evidence-Based Practices in Counselor Education Curricula**

Dear Researcher:

Your research protocol was reviewed by the IRB Vice-chair on 8/7/2009. Per federal regulations, 45 CFR 46.101, your study has been determined to be **minimal risk for human subjects and exempt** from 45 CFR 46 federal regulations and further IRB review or renewal unless you later wish to add the use of identifiers or change the protocol procedures in a way that might increase risk to participants. Before making any changes to your study, call the IRB office to discuss the changes. **A change which incorporates the use of identifiers may mean the study is no longer exempt, thus requiring the submission of a new application to change the classification to expedited if the risk is still minimal.** Please submit the Termination/Final Report form when the study has been completed. All forms may be completed and submitted online at https://iris.research.ucf.edu.

The category for which exempt status has been determined for this protocol is as follows:

2. Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey or interview procedures, or the observation of public behavior, so long as confidentiality is maintained.

(i)   Information obtained is recorded in such a manner that the subject cannot be identified, directly or through identifiers linked to the subject, **and/or**

(ii)   Subject's responses, if known outside the research would not reasonably place the subject at risk of criminal or civil liability or be damaging to the subject's financial standing or employability or reputation.

The IRB has approved a **waiver of documentation of consent** for all subjects. Participants do not have to sign a consent form, but the IRB requires that you give participants a copy of the IRB-approved consent form, letter, information sheet. For online surveys, please advise participants to print out the consent document for their files.

All data, which may include signed consent form documents, must be retained in a locked file cabinet for a minimum of three years (six if HIPAA applies) past the completion of this research. Any links to the identification of participants should be maintained on a password-protected computer if electronic information is used. Additional requirements may be imposed by your funding agency, your department, or other entities. Access to data is limited to authorized individuals listed as key study personnel.

On behalf of Joseph Bielitzki, M.S., DVM, UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 08/10/2009 11:44:39 AM EDT

IRB Coordinator

APPENDIX B:
CONTACT LETTERS

First Contact Letter

_____, 2009

Dear _____:

My name is Samir H. Patel. I am doctoral candidate at the University of Central Florida in the Counselor Education Program. Within the next week or so, you will receive an email request to complete a brief questionnaire for an important research project being conducted by the University of Central Florida. The questionnaire should take about 20 to 30 minutes to complete.

I am writing you in advance because we have learned that people, more often than not, like to be informed prior to being contacted. The overall purpose of this study is to investigate counselor educator attitudes towards evidence-based practices and perceived barriers to teaching evidence-based practices in counselor education curricula. This study is important because the analyzed data will contribute to counselor education literature by denoting the first evaluation of evidence-based practice incorporation in counselor education curricula.

It is important to note that this study has the support of the UCF Institutional Review Board. For information about the rights of people who take part in research, you may contact the UCF IRB at IRB@mail.ucf.edu or by telephone at (407) 823-2901.

If you have any preliminary questions regarding the study please feel free to contact myself, (407) 902-9264/ spatel@mail.ucf.edu; or Dr. W. Bryce Hagedorn, (407) 823-2999/ drbryce@mail.ucf.edu.

Thank you for your time and consideration. It's only with the generous help of people like you that our research can be successful.

Sincerely,

Samir H. Patel
Doctoral Candidate
University of Central Florida

Second Contact Letter

_____, 2009

Dear _____:

My name is Samir H. Patel. I am doctoral candidate at the University of Central Florida in the Counselor Education Program. I am writing to ask for your assistance in a study that is being conducted to investigate counselor educator attitudes towards the adoption of evidence-based practices in counselor education. Furthermore, the study aims to identify possible barriers and facilitators towards the incorporation of evidence-based practices into counselor education curricula. This study is part of an overall effort to investigate where the evidence-based practice movement stands in counselor education.

We contacted a random selection of counselor educators that are current members of the Association of Counselor Education and Supervision due to their unique and influential role in promoting the growth of individuals within the counseling field. We are inquiring about your thoughts, feelings, and attitudes towards the adoption of evidence-based practices in counselor education curricula. The questionnaire should take about 20 to 30 minutes to complete.

Results from the survey will be used to inform the counseling literature where the evidence-based movement stands in counselor education. Specifically, results will help to identify facilitators and barriers to the adoption of training counseling-students in evidence-based practices.

Your participation in this study is voluntary. If you choose to participate, please note the confidential nature of this study. The hyperlink contained within this email is authentic and unique to you. Upon submission of the survey your contact information will be deleted. Although this study is voluntary, you can help us by taking a few minutes to share your experiences and thoughts towards evidence-based practices.

Dr. Bryce Hagedorn, an assistant professor at the University of Central Florida will supervise this research due to my status as a doctoral candidate. If you have any questions or comments about this study, we would be happy to talk with you. My email address is spatel@mail.ucf.edu and my phone number is (407) 902-9264. Dr. Hagedorn's email address is drbryce@mail.ucf.edu and his telephone number is (407) 823-2999.

Additionally, it is important to note that research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). Thus, this study has the support of the UCF IRB. For information about the rights of people who take part in research, you may contact the UCF IRB at IRB@mail.ucf.edu or by telephone at (407) 823-2901.

If this study is of interest to you, or if you want to review the informed consent from, click your

unique URL address or copy and paste the URL address into your web browser:
http://www.surveymonkey.com/s.aspx .

Thank you very much for helping with this important study.

Sincerely,

Samir H. Patel
Doctoral Candidate
University of Central Florida

Please note: If you do not wish to receive further emails from us, please click the link below, and you will be automatically removed from our mailing list.
http://www.surveymonkey.com/optout.aspx

Third Contact Letter

_____, 2009

Dear _____,

Last week a link to an online questionnaire seeking your thoughts and attitudes towards the inclusion of evidence-based practices in counselor education curricula was e-mailed to you. We are contacting counselor educators who are active members of ACES due to their unique and influential role in promoting the growth of individuals within the counseling field.

If you have already completed and submitted the questionnaire to us, please accept our sincere thanks. If not, please do so today. This questionnaire should take about 20 to 30 minutes to complete. We are especially grateful for your help because it is only by asking people like you to share your thoughts and perceptions that we can understand where the evidence-based practice movement stands in the counselor-training profession.

Furthermore, it is important to note to that the UCF IRB, which oversees research involving human participants, has approved this study. If you have questions regarding the rights of people that participate in research you may contact the UCF IRB at IRB@mail.ucf.edu or by telephone at (407) 823-2901.

If you have any questions or concerns, you can either contact the faculty supervisor, Dr. Bryce Hagedorn, or myself. My email address is spatel@mail.ucf.edu and my phone number is (407) 902-9264. Dr. Hagedorn's email address is drbryce@mail.ucf.edu and his telephone number is (407) 823-2999.

If this study is of interest to you, or if you want to review the informed consent from, click your unique URL address or copy and paste the URL address into your web browser:
http://www.surveymonkey.com/s.aspx

Sincerely,

Samir H. Patel
Doctoral Candidate
University of Central Florida

Please note: If you do not wish to receive further emails from us, please click the link below, and you will be automatically removed from our mailing list.
http://www.surveymonkey.com/optout.aspx

Fourth Contact Letter

_____, 2009

Dear _____:

About three weeks ago, Dr. Bryce Hagedorn and I sent an email with a link to a questionnaire seeking your thoughts and attitudes towards the adoption of evidence-based practices in counselor education curricula. To the best of our knowledge, the questionnaire has not yet been submitted. This questionnaire should take about 20 to 30 minutes to complete. Submitted surveys thus far have reflected a wide range of attitudes towards evidence-based practices. We think that these results are going to be useful in terms of assessing where the evidence-based practice movement stands in counselor-training programs.

It is important to note that participation is voluntary and there is no penalty for not taking part in this study. However, this study marks the first formal study to investigate counselor educator attitudes towards evidence-based practices. As such, your response to the questionnaire will be crucial in depicting a more accurate representation of evidence-based practices in the counseling profession.

At this point, a few individuals contacted me to say that they should not have received the email, as they were not counselor educators. If this is the case or if there is some other reason that this questionnaire is inapplicable to you, please let us know by contacting me either through email or by phone.

A comment on our survey procedures: the hyperlink at the bottom of this email is unique to you. Thus, your name will be deleted from the distribution list when the survey is completed so that individual names can never be connected to the results in any way. Protecting the confidentiality of people's responses is very important to us, as well as the University of Central Florida.

If you have questions regarding the protection of individuals' participation in research, you can contact the UCF IRB at IRB@mail.ucf.edu or by telephone at (407) 823-2901.

We hope that you will complete and submit the questionnaire soon, but if for any reason you prefer not to answer it, or if you have any questions, please let us know. My email address is spatel@mail.ucf.edu and my phone number is (407) 902-9264. Dr. Hagedorn can be reached at drbryce@mail.ucf.edu or at (407) 823-2999.

If this study is of interest to you, or if you want to review the informed consent from, click your unique URL address or copy and paste the URL address into your web browser:
http://www.surveymonkey.com/s.aspx

Sincerely,

Samir H. Patel
Doctoral Candidate
University of Central Florida

Please note: If you do not wish to receive further emails from us, please click the link below, and you will be automatically removed from our mailing list.
http://www.surveymonkey.com/optout.aspx

Fifth Contact Letter

_____, 2009

Dear _____:

During the past month Dr. Bryce Hagedorn and I have sent you several emails about an important research study that we are conducting for the University of Central Florida.

The overall purpose of this quantitative study is to investigate counselor educator attitudes and perceptions towards the adoption of evidence-based practices into counselor education curricula.

The study is drawing to a close, and this is the last contact that will be made with the random sample of people who we think are counselor educators.

Although your participation in this study will not directly benefit you, nor will you receive compensation or other payment for taking part in this study, we are sending this final contact because of our concern that people who have not responded may hold different attitudes than those who have participated. Hearing from everyone in this small sample helps assure that the survey results are as accurate as possible.

We hope that you will complete and submit the questionnaire soon, but if for any reason you prefer not to answer it, please let us know. We also want to assure you that your response to this study is voluntary and if you prefer not to respond that's fine too. If you are not a counselor educator, and you feel that we have made a mistake including you in this study, please contact us and let us know.

If you have questions regarding the protection of individuals' participation in research, you can contact the UCF IRB at IRB@mail.ucf.edu or by telephone at (407) 823-2901.

This questionnaire should take about 20 to 30 minutes to complete. If you have any questions, please feel free to contact me. My email address is spatel@mail.ucf.edu and my phone number is (407) 902-9264. Dr. Hagedorn can be reached at drbryce@mail.ucf.edu or at (407) 823-2999.

If this study is of interest to you, or if you want to review the informed consent from, click your unique URL address or copy and paste the URL address into your web browser:
http://www.surveymonkey.com/s.aspx

Sincerely,

Samir H. Patel
Doctoral Candidate
University of Central Florida

Please note: If you do not wish to receive further emails from us, please click the link below, and you will be automatically removed from our mailing list.
http://www.surveymonkey.com/optout.aspx

APPENDIX C:
ONLINE SURVEY

Researchers at the University of Central Florida (UCF) study many topics. To do this we need the help of people who agree to take part in a research study. You are being invited to take part in a research study, which will include about 2000 people. You can ask questions about the research. You can read this form and agree to take part right now, or print this form and take it home with you to study before you decide. You will be told if any new information is learned which may affect your willingness to continue taking part in this study. You have been asked to take part in this research study because you are a member of the Association of Counselor Education and Supervision. You must be 18 years of age or older to be included in the research study.

The person doing this research is Samir H. Patel, a doctoral candidate in the counselor education program at the University of Central Florida. Due to the researcher's status as a doctoral candidate, Dr. W. Bryce Hagedorn, a University of Central Florida faculty supervisor in the Department of Child, Family and Community Sciences, will supervise this project.

Study title: An Investigation of Counselor Educator Attitudes towards Evidence-Based Practices and Perceived Barriers to the Incorporation of Evidence-Based Practices in Counselor Education Curricula

Purpose of the research study: The overall purpose of this quantitative study is to investigate counselor educator attitudes towards the adoption of evidence-based practices in counselor education curricula. Specifically, this study will (a) measure counselor educator attitudes towards evidence-based practices and (b) identify facilitators and barriers towards the inclusion of evidence-based practices in counselor education curricula.

What you will be asked to do in the study: You will be asked to participate in the completion of an online survey that addresses perceptions surrounding the incorporation of evidence-based practices.

Voluntary participation: You should take part in this study only because you want to. There is no penalty for not taking part, and you will not lose any benefits. You have the right to stop at any time by exiting the survey or closing the window. Furthermore, you have the option of leaving the survey and then resuming the survey from where you left, by clicking on the hyperlink contained in your email. You will be told if any new information is learned which may affect your willingness to continue taking part in this study.

Location: Due to the online format of this study, you can complete this survey anytime and at any computer that has access to the Internet.

Time required: The online survey will take approximately 20 to 30 minutes to complete.

Audio or video taping: This study does not include any audio or video taping.

Risks: There are no expected risks for taking part in this study. You do not have to answer every question or complete every task. You will not lose any benefits if you skip questions or tasks.

Evidence-Based Practices in Counselor Education

Expereince with Evidence-Based Practices

The following items will ask about your training and clinical experiences with evidence-based practices. For the purposes of this study evidence-based practice will be defined as counseling strategies that have demonstrated efficacy in treating specific psychological issues within randomized clinical trails. Training will be defined as a form of education where the central focus was the implementation of an evidence-based practice for clinical purposes. Please select the most appropriate responses that best describe you.

Have you ever been trained in an evidence-based practice?

◯ Yes

◯ No

Where have you received the _most_ training in the application of an evidence-based practice? (Please choose one)

◯ Graduate study program

◯ Certification program/workshop

◯ Seminar / Continuing education

◯ On-the-job training

◯ Self-study

◯ Other

◯ Does not apply

Evidence-Based Practice Attitude Scale (Aarons, 2004)

The following questions ask about your feelings about using new types of therapy, interventions, or treatments. Manualized therapy refers to any intervention that has specific guidelines and/or components that are outlined in a manual and/or that are to be followed in a structured/predetermined way.

If you currently provide counseling services to clients, please answer the questions in relation to your current work setting. If you are not currently providing counseling services, you may refer to your prior experience as a counselor or provide your general perceptions of a counselor.

Please indicate the extent to which you agree with each item below by using the provided scale.

	Not at All	To a Slight Extent	To a Moderate Extent	To a Great Extent	To a Very Great Extent
I like to use new types of therapy/interventions to help my clients.	○	○	○	○	○
I am willing to try new types of therapy/interventions even if I have to follow a treatment manual.	○	○	○	○	○
I know better than academic researchers how to care for my clients.	○	○	○	○	○
I am willing to use new and different types of therapy/interventions developed by researchers.	○	○	○	○	○
Research based treatments/interventions are not clinically useful.	○	○	○	○	○
Clinical experience is more important than using manualized therapy/interventions.	○	○	○	○	○
I would not use manualized therapy/interventions.	○	○	○	○	○
I would try a new therapy/intervention even if it were very different from what I am used to doing.	○	○	○	○	○

If you received training in a therapy or intervention that was new to you, how likely would you be to adopt it if:

	Not at All	To a Slight Extent	To a Moderate Extent	To a Great Extent	To a Very Great Extent
it was intuitively appealing?	○	○	○	○	○
it "made sense" to you?	○	○	○	○	○
it was required by your supervisor?	○	○	○	○	○
it was required by your agency?	○	○	○	○	○
it was required by your state?	○	○	○	○	○
it was used by your colleagues who were happy with it?	○	○	○	○	○
you felt you had enough training to use it correctly?	○	○	○	○	○

Evidence-Based Practices in Counselor Education

The BARRIERS Scale (Adapted from Funk, Champagne, Wiese, & Tornquist, 1991)

Literature indicates that counselor educators typically do not incorporate evidence-based practices into their teachings. There are a number of reasons why this might be. I would like to know the extent to which you think each of the following situations is a barrier to counselor educators' use of research to alter/enhance the training of student-counselors.

If you hold a position as a counselor educator, please answer the questions in relation to your current work setting. If you are not currently a counselor educator, you may refer to your prior experience as a counselor educator or provide your general perceptions of a counselor educator.

Please indicate the extent to which you agree with each item below by using the provided scale.

	To no extent	To a little extent	To a moderate extent	To a great extent	No opinion
1. Research reports/articles are not readily available.	○	○	○	○	○
2. Implications for training student-counselors in evidence-based practices are not made clear.	○	○	○	○	○
3. Statistical analyses are not understandable.	○	○	○	○	○
4. The research is not relevant to counselor education.	○	○	○	○	○
5. You are unaware of the research in counselor education.	○	○	○	○	○
6. The resources are inadequate for training student-counselors in evidence-based practices.	○	○	○	○	○
7. You do not have time to read research.	○	○	○	○	○
8. The research has not been replicated.	○	○	○	○	○
9. You feel the benefits of incorporating research in counselor education will be minimal.	○	○	○	○	○
10. You are uncertain whether to believe the results of the research.	○	○	○	○	○
11. The research has methodological inadequacies.	○	○	○	○	○
12. The relevant literature is not compiled in one place.	○	○	○	○	○
13. You do not feel you have enough authority to change the training procedures for student-counselors.	○	○	○	○	○
14. You feel the research results are not generalizable to a degree that would benefit the training of student-counselors.	○	○	○	○	○

Evidence-Based Practices in Counselor Education

15. You are isolated from knowledgeable colleagues with whom to discuss the research.	◯	◯	◯	◯	◯
16. You see little benefit for self from incorporating evince-based practices into your current curriculum.	◯	◯	◯	◯	◯
17. Research reports/articles are not published fast enough.	◯	◯	◯	◯	◯
18. Colleagues will not support the training of student-counselors in evidence-based practices.	◯	◯	◯	◯	◯
19. Administration will not support the training of student-counselors in evidence-based practices.	◯	◯	◯	◯	◯
20. You do not see the value of training student-counselors in evidence-based practices.	◯	◯	◯	◯	◯
21. There is not a documented need to change the way student-counselors are trained.	◯	◯	◯	◯	◯
22. The conclusions drawn from research are not justified.	◯	◯	◯	◯	◯
23. The literature reports conflicting results.	◯	◯	◯	◯	◯
24. The research is not reported clearly and readably.	◯	◯	◯	◯	◯
25. Other faculty are not supportive of training students in evidence-based practices.	◯	◯	◯	◯	◯
26. You are unwilling to change/try new ideas.	◯	◯	◯	◯	◯
27. The amount of research is overwhelming.	◯	◯	◯	◯	◯
28. You do not feel capable of evaluating the quality of research.	◯	◯	◯	◯	◯
29. There is insufficient time in the course to incorporate new ideas.	◯	◯	◯	◯	◯

Are there other things you think are barriers to the incorporation of evidence-based practices in counselor education curricula? If so, please list and rate each of the barriers, ranking the greatest barrier in the first box and the least greatest barrier in the last box.

1.
2.
3.

Which of the above items, including the items that you listed, do you feel are the three greatest barriers to training student-counselors in evidence-based practices?

Greatest Barrier...........................Item #

2nd Greatest Barrier......................Item #

3rd Greatest Barrier......................Item #

Please indicate the level of agreement you place on the following counseling principles being present in the counseling relationship. Check only one response per principle.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Expressing empathy and respect towards the client.	◯	◯	◯	◯	◯
Identifying discrepancies between the client's values and problematic behaviors.	◯	◯	◯	◯	◯
Navigating client resistance so as to not engage in a power struggle with the client.	◯	◯	◯	◯	◯
Normalizing and exploring client ambivalence to change.	◯	◯	◯	◯	◯
Supporting the client's sense of self-efficacy to change.	◯	◯	◯	◯	◯

Motivational Interviewing

Do you know of or have you ever heard about motivational interviewing?

◯ Yes

◯ No

How aware are you that the principles on the previous page (expressing empathy, identifying discrepancies, rolling with resistance, normalizing and exploring ambivalence, and supporting self-efficacy) represent the guiding principles of motivational interviewing?

◯ Not at all aware

◯ Somewhat aware

◯ Aware

◯ Very aware

How familiar are you with these guiding principles of motivational interviewing?

◯ Not at all familiar

◯ Somewhat familiar

◯ Reasonably familiar

◯ Very familiar

How open are you to including the guiding principles of motivational interviewing into the counselor education curriculum?

◯ Not at all open

◯ Somewhat open

◯ Open

◯ Very open

The following questions will ask about your experience as a professional counselor/clinician/helper. Please select the most appropriate response that best describes you for each item below.

Please indicate the amount of clinical experience you have accumulated in your lifetime:

◯ 0 to 5 years

◯ 6 to 10 years

◯ 11 to 15 years

◯ 16 or more years

Please indicate the primary counseling/theoretical orientation that best represents you:

◯ Psychoanalytic

◯ Adlerian

◯ Existential

◯ Person-Centered

◯ Gestalt

◯ Behavioral

◯ Cognitive-Behavioral

◯ Reality (Choice)

◯ Feminist

◯ Solution-Focused Brief Therapy

◯ Narrative

◯ Family Systems

Evidence-Based Practices in Counselor Education

Please select the type(s) of license(s)/certification you possess (mark all that apply):

☐ Licensed Professional Counselor (LPC)

☐ Licensed Mental Health Counselor (LMHC)

☐ Licensed Marriage and Family Therapist (LMFT)

☐ Certified School Counselor

☐ Licensed Clinical Social Worker (LCSW)

☐ State Licensed Psychologist

☐ Medical Doctor (MD)

☐ Not licensed

Please indicate the category that best describes your primary clinical identity:

○ Mental Health Counselor

○ Addiction Counselor

○ School Counselor

○ Career Counselor

○ Marriage and Family Therapist

○ Student Affair and College Counselor

○ School Psychologist

○ Clinical Psychologist

○ Counseling Psychologist

○ Social Psychologist

○ Social Worker

○ Psychiatrist

Evidence-Based Practices in Counselor Education

Please indicate the degree that best describes your highest degree earned:

- ◯ MA / MS
- ◯ MSW
- ◯ M.Ed.
- ◯ Ed.S.
- ◯ Ed.D.
- ◯ Psy.D.
- ◯ Ph.D.
- ◯ MD

Please indicate the year when you earned your highest degree:

[   ]

Please indicate the closest discipline in which your highest degree was earned:

- ◯ Counselor Education
- ◯ Social Work
- ◯ Social Psychology
- ◯ Clinical Psychology
- ◯ Counseling Psychology
- ◯ Psychiatry

Is counselor educator your primary professional identity?

- ◯ Yes
- ◯ No

Evidence-Based Practices in Counselor Education

The following questions will ask about your experience as a counselor educator. Please select the most appropriate response that best describes you for each item below.

Please indicate the number of years you have been a counselor educator:

[   ]

Please indicate your primary counselor education focus:

◯ Addiction Counseling

◯ Career Counseling

◯ Mental Health/Community Counseling

◯ Marriage, Couple, and Family Counseling

◯ School Counseling

◯ Student Affairs and College Counseling

Please indicate the position that best describes your faculty rank:

◯ Full Professor

◯ Associate Professor

◯ Assistant Professor

◯ Adjunct Professor

◯ Visiting Instructor

◯ Instructor

◯ Lecturer

◯ Other

◯ Does not apply

Please indicate the average number of courses you teach per semester (not including the summer semester):

◯ 0

◯ 1

◯ 2

◯ 3

◯ 4

◯ 5 or more

Please indicate the type of program that best describes the counselor education program, at which you teach the majority of your courses:

◯ Master's only program (no doctoral degree)

◯ Counselor education doctorate-granting program

Please indicate the CACREP accreditation status for the counselor education program where you teach the majority of your courses:

◯ CACREP Accredited Institution

◯ Non-CACREP Accredited Institution

◯ Actively seeking CACREP Accreditation

Please indicate the ACES region to which you affiliate with the most:

◯ North Atlantic

◯ North Central

◯ Southern

◯ Rocky Mountain

◯ Western

◯ Other

◯ None

We are especially grateful for your consideration to help us investigate where the evidence-based practice movement stands in counselor education.

Thank you so much for your time!

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