

ABSTRACT

Complementary and Alternative Interventions: Attitudes and Personal Use of
Counselors-In-Training in Rehabilitation Counseling and Counselor Education Programs

by

Celeste S. Crawford

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Director: Stephen J. Leierer

Department of Addictions and Rehabilitation Studies

There is a growing awareness and use of complementary and alternative medicine and complementary and alternative interventions (CAM/CAI) in the United States. Research and education in both the medical and nursing professions reflect this developing paradigm; however, there is sparse research concerning counselors-in-training views on CAM/CAI and their willingness to incorporate these approaches into clinical practice. This study addressed the gap in research by exploring what counselors-in-training know and what their attitudes are toward CAM/CAI in order to enable counselor educators to be better informed and prepared to proceed with integrating these practices into training and curriculum. Using the *Survey of Knowledge and Attitudes of Counseling Students Towards CAM/CAI*, we surveyed counselors-in-training (n = 93) enrolled in a CACREP accredited counselor education program and a CACREP accredited rehabilitation counseling program at the same university. The results indicate that a majority of the students had positive attitudes towards CAM/CAI and believed this topic should be integrated into counselor training curriculum. Further analysis found that there was no significant difference in general attitudes towards CAM/CAI between any of the demographic variables. Additionally, there was no significant difference in classification of

CAM/CAI modalities as mainstream or alternative and any of the demographic variables.

Finally, the results of this study show there was a significant relationship between personal use of CAM/CAI and willingness to incorporate CAM/CAI modalities into future clinical practice.

Limitations of the study include a lack of a control group, a relatively small sample size, and the need for more valid and reliable instrumentation. The study concludes with implications for the counseling profession, counselor education, and future research.

COMPLEMENTARY AND ALTERNATIVE INTERVENTIONS: ATTITUDES AND USE OF
COUNSELORS-IN-TRAINING IN COUNSELOR EDUCATION PROGRAMS

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Celeste S. Crawford

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by

Celeste S. Crawford

APPROVED BY:

DIRECTOR OF DISSERTATION: _____
Stephen J. Leierer, PhD

COMMITTEE MEMBER: _____
Allison Crowe, PhD

COMMITTEE MEMBER: _____
Lloyd R. Goodwin, Jr. PhD

COMMITTEE MEMBER: _____
Paul J. Toriello, RhD

CHAIR OF THE DEPARTMENT OF
ADDICTIONS AND REHABILITATION STUDIES: _____
Paul J. Toriello, RhD

DEAN OF THE GRADUATE
SCHOOL: _____
Paul J. Gemperline, PhD

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Chapter 1: INTRODUCTION

Introduction to the Study

This chapter introduces the research study, which examines the attitudes of counselors-in-training towards complementary and alternative medicine (CAM) and complementary and alternative interventions (CAI). Counselors-in-training attitudes toward CAM/CAI, personal experience with CAM/CAI, and willingness to incorporate alternative approaches in counseling practice are also explored. This chapter provides the background of the study, the theoretical underpinnings of the study, the gaps in knowledge this study will address, and justification for the necessity of this study. This chapter also contains the research questions and the definitions of the key terms used in this study.

Background of the Study

Prevalence of Complementary and Alternative Medicine and Interventions

Complementary and alternative medicine and interventions are therapies and health care approaches not commonly found in conventional health care. The term “complementary” refers to a non-mainstream practice that is used in conjunction with conventional medicine and the term “alternative” refers to a non-mainstream practice that is used instead of conventional medicine (National Center for Complementary and Alternative Medicine, [NCCAM] 2014). CAM/CAI therapies can be classified into five domains: 1) alternative medical systems such as homeopathy or ayurveda, 2) mind-body interventions or techniques such as meditation or guided imagery, 3) biologically based systems such as vitamins, herbs, or supplements, 4) manipulative and body-based methods such as massage therapy or chiropractic, and 5) energy therapies such as bioelectromagnetic therapies (National Institute of Health, 2012).

Public awareness and use of CAMs/CAIs is rapidly increasing in the United States. According to the National Health Interview Survey in 2007, 38% of Americans used complementary and alternative medicine or interventions, up from 36% in 2002. The 2007 survey also showed that Americans spent approximately 33.9 billion dollars out of their own pockets on CAM/CAI products and visits to practitioners (NCCAM, 2014).

A growing number of studies support the effectiveness of CAM/CAI emerging from the fields of medicine, nursing, psychology, and psychiatry, among others. These studies highlight the biological functions and systems that regulate emotions and affect the body systems, such as the immune system. Much of this research focuses on chronic pain, physical disorders, and the psychological benefits of CAM/CAI such as relief from anxiety and depression symptoms (NCCAM, 2014). Elkins, Fisher, and Johnson (2012) found that hypnosis significantly improved various measures of hot flashes in postmenopausal women. A meta-analysis by Vickers, Cronin, and Maschino (2012) found acupuncture to be effective in treating chronic pain. The authors noted that this study provides robust evidence that acupuncture is more than a placebo and is a reasonable referral option for patients experiencing chronic pain (Vickers, et al., 2012).

In addition to treating physical issues, there is a growing body of research supporting the use of CAM/CAI in treating substance abuse and mental health concerns. For example, in 2010, the Department of Veterans Affairs requested a review of CAM treatments for post-traumatic stress disorder in order to begin developing policies to support further research (National Center for PTSD, 2015). Also, in 2006 the Substance Abuse and Mental Health Services Administration (SAMHSA) mentioned aural acupuncture as a beneficial treatment in the Treatment Improvement Protocol (TIP) 45 manual (SAMHSA, 2006). A pilot study published in the *Journal of School Psychology* found that middle school students who participated in a 6-week

classroom based mindfulness meditation program were less likely to develop suicidal thoughts or self-harming thoughts and behavior (Britton, Lepp, Niles, Rocha, Fisher, & Gould, 2014).

Well regarded, mainstream medical centers such as the Mayo Clinic, Duke University Medical Center, Yale University, and University of Pennsylvania offer CAM modalities. These institutions offer clinical services to patients, conduct research on the effectiveness of modalities, and offer coursework to students in Reiki, acupuncture, nutrition, meditation, and mindfulness (Comarow, 2008). The increase in scientific evidence regarding the effectiveness of CAM/CAI and growing support by esteemed medical institutions has increased the popularity of CAM/CAI and has also piqued health professionals' interest in incorporating these interventions into clinical care models.

Medical and nursing education now teach integrative medicine, which is a combination of conventional and CAM/CAI approaches (DeSylvia et al., 2011). Lake and Spiegel (2007) noted that medical literature related to CAM/CAI focused on both the validity of the mind-body connection and treatment protocol for specific health issues and also examines the ethics and logistics involved in incorporating CAM/CAI into the training of medical professionals. The nursing profession has also established a strong link with CAM/CAI practices. In 2006, the American Nurses Association (ANA) established holistic nursing as an official specialty defined as, "all nursing practice that has healing the whole person as its goal." Additionally, the definition goes on to state, "Holistic nurses may integrate complementary/alternative modalities (CAM) into clinical practice to treat people's physiological, psychological, and spiritual needs. Doing so does not negate the validity of conventional medical therapies but serves to complement, broaden and enrich the scope of nursing practice to help the individual access their greatest healing potential." (American Holistic Nursing Association, 2015).

Both the medical and nursing professions have set a precedent that could benefit the field of counseling to follow. According to Berger (2011), “as increasing numbers of people utilize CAM, it would behoove counselors and counselor educators to be better prepared to work with clients who utilize CAM therapies as adjunctive treatments to mental health counseling. Working with both CAM and traditional counseling methods could lead to a holistic and optimal treatment process” (p. 1). To create a strong clinical foundation for this approach, counselors-in-training should be introduced to CAM/CAI as part of their graduate training.

A tenet in counselor education and the counseling profession is caring for the whole person and the promotion of wellness. Wellness in counseling is, “a way of life oriented toward optimal health and well-being in which mind, body, and spirit are integrated by the individual to live more fully within the human and natural community” (Myers, Sweeney, & Whitmer, 2000, p. 252). Within the framework of wellness, the counseling field acknowledges several forms of CAM/CAI such as biofeedback and relaxation techniques (Myers & Young, 2012). Additionally, the practice of mindfulness, which includes meditation, guided imagery, yoga, and breathing techniques, is increasingly researched and validated in the counseling literature (Schure, Christopher, & Christopher, 2008). These are techniques that counselors use to understand and support their own wellness as well as their clients’ (Christopher & Maris, 2010; Rothaupt & Morgan, 2007; Schure, Christopher, & Christopher, 2008). However, despite counseling’s emphasis on wellness and care of the whole person, the profession has not created any formal connections with the medical field and has not progressed in integrating CAM/CAI or mind-body research into teaching or professional practice in any official capacity.

Statement of the Problem

A study by the National Institutes of Health (NIH) confirmed a growing interest and use of CAM/CAI in the United States general population. According to the NIH's National Health Statistics Report (Clarke, Black, & Stussman et al., 2015), 36% of adults use some form of CAIs to assist with the treatment of medical and mental health issues. This increase in popularity has had a positive effect on the health care system as many allied health professionals strive to integrate these modalities into practice. According to DiNuccio (2005, as cited in Berger, 2011) "They [allied health professionals] appear to be committed to exploring avenues of integrative health care in two ways. The first way is by operating in a paradigm of holism, as opposed to reductionism, in healthcare prevention and treatment. The second way is through creating programs and research grounded in solid, empirical science" (p. 3). Much of the research conducted by these allied health professionals, particularly medicine and nursing, has helped shape research, training, and the establishment of ethical guidelines for integration of CAM/CAI modalities into the treatment process (Caldwell et al., 2006).

Although the use of CAM/CAIs is gaining increased attention in mainstream health care, there still is sparse research concerning counselors' attitudes toward CAM and CAI, their own use of CAM/CAI, and their willingness to incorporate these approaches into counseling practice. A mixed method study by Becvar, Caldwell, & Winek (2006) looks at the attitudes of clinical members of the American Association for Marriage and Family Therapy towards CAM practices in therapy, of which 10% of the subjects (n=42) identified as counselors. A grounded theory study conducted by Nichols (2015) examined the use of complementary therapies (CT) by 16 professional counselors to gain a better understanding of why and how counselors use CT in the counseling process and, to date, this appears to be the only study conducted on professional

counselors. The current study assists in filling this gap in research by exploring counselors-in-training attitudes, personal use, and willingness to incorporate CAM/CAI into the assessment and treatment of mental health and substance use disorders.

Theoretical Rationale

The integration of CAMs/CAIs in the treatment of mental health and substance use disorders is an important consideration for counselors. The purpose of this study is to gather information about counselors-in-training attitudes toward and personal use of CAM/CAI and their willingness to integrate CAM/CAI in the assessment and treatment of mental health and substance use disorders. Specifically, this study will introduce the Integrative Mental Health Model (IMH) as a framework for including CAM/CAI in the counseling process. The IMH model was developed by Dr. James Lake, a board certified psychiatrist, who specializes in integrative mental health care and is currently a visiting professor of medicine at the University of Arizona School of Medicine, Center for Integrative Medicine (Lake, 2009). This model addresses mental health from a holistic perspective by incorporating issues of wellness, spirituality, and cultural diversity in counseling. This approach involves incorporating CAM/CAI methods along with traditional psychotherapy to gain the most benefit for clients. According to Lake (2009, as cited in Berger, 2011), IMH is, “a pragmatic and progressive approach in that it takes into consideration the energy system, the limits of the research methodology, and the fact that there are real effects that may be challenging to measure using the traditional scientific method” (p. 6). Berger (2011) goes on to state that although there are clinicians who use a holistic approach without using this label, the IMH, “seems to be one of the first models to rigorously examine the evidence and begin proposing mental health treatment protocols which organize the disparate CAM treatment” (p. 6). If counselors are to be effective in providing

comprehensive care from an integrative model of care, it is essential that they not only acknowledge clients' use of CAM, but also integrate CAM into assessment, treatment planning, and service delivery. The purpose of this study is to examine the knowledge, attitudes, and personal use patterns of counseling students regarding CAM and CAI.

Study Justification

The use of CAM/CAI is on the increase and is moving into mainstream treatment for many mental health and substance use disorders. Most of the research is related to chronic pain and other physical maladies such as arthritis, asthma, cardiovascular issues, and digestive disorders. However, some studies examine psychological issues such as depression and anxiety (NCCAM, 2014). For example, Volz and Keiser (1997) found that kava kava, a plant extract, is effective in reducing anxiety symptoms in individuals diagnosed with generalized anxiety disorder, agoraphobia, and adjustment disorder. Collinge, Wentworth, and Sabo (2005) investigated the effectiveness of combining psychotherapy with energy therapies to treat trauma-based disorders such as post-traumatic stress disorder (PTSD) and found favorable results.

There are also several studies that show positive outcomes for the use of acupuncture as a complementary treatment for substance abuse (Brumbaugh, 1993). The National Acupuncture Detoxification Association (NADA) protocol is an aural acupuncture technique that was originally designed as a complementary treatment for opioid withdrawal (Raith, Kutschera, Muller, & Urlesberger, 2011). The NADA protocol consists of the use of three to five acupuncture needles placed in specific points in each outer ear for up to an hour in order to help calm a patient and decrease withdrawal symptoms (D'Alberto, 2004). This protocol can be used along with a comprehensive counseling program to increase the overall clinical benefit of treatment for the client (Collis, 2008). Reported outcome measure of NADA include improved

sleep, increased optimism and engagement in treatment, and decreased anxiety, cravings, and pharmaceutical interventions (Otto, 2003; Stuyt & Meeker, 2006).

Although there are several empirical studies connecting CAM/CAI and the helping professions, there is a dearth of studies that specifically examine the link between counselors and CAM/CAI modalities (Berger, 2011). A national survey conducted by Becvar, Caldwell, and Winek (2006) examined the attitudes of marriage and family therapists (MFTs) toward incorporating CAM in the therapy process and found that MFTs are working with clients who favor the use of CAM as a part of their overall treatment. Recommendations included providing MFTs more education regarding CAM, specifically in the areas of assessment and treatment. Another study conducted by Greub and McNamara (2000) revealed that psychological practitioners who wish to incorporate CAM/CAI when working with clients have minimal guidance from professional organizations as to how to ethically proceed. Exploring what counselors-in-training know and their attitudes toward CAM/CAI will enable counselor educators to be better informed and prepared to proceed with integrating these practices into training and curriculum.

Research Questions

Research Question 1: What is the relationship between the demographic variables (age, gender, program, ethnicity, disability status, completed credit hours) and general attitudes towards CAM/CAI (scale one) on the *Survey of Knowledge and Attitudes of Counseling Students Toward CAM/CAI?*

Research Question 2: What is the relationship between the demographic variables (age, gender, program, ethnicity, disability status, completed credit hours) and classification of

CAM/CAI interventions as alternative or mainstream (scale three) on the *Survey of Knowledge and Attitudes of Counseling Students Toward CAM/CAI*?

Research Question 3: Is there a relationship between personal use of CAM/CAI practices and willingness to incorporate CAM/CAI approaches into counseling practice?

Study Significance

As the use of CAI becomes more prevalent in the United States health care system, it is imperative that counselors-in-training are knowledgeable about the use of CAIs and are able to integrate them into the counseling paradigm. Other researchers in health and helping professions are currently examining the attitudes of stakeholders including patients or clients, educators, and students. The results are improving the integration of CAM/CAI into the existing systems (DeSylvia et al., 2011). The current study will explore counselor-in-training attitudes toward CAM/CAI, their personal experience with CAM/CAI modalities, and their willingness to utilize CAM/CAI in their professional practice. The results of this study will provide knowledge about what counselors-in-training believe about CAM/CAI, and how they see its relevance to the practice of professional counseling.

Definition of Terms

Bio-psychosocial model (BPS): The BPS model is for conceptualizing assessment and treatment of disease or illness that incorporates biological, psychological, and social factors.

Complementary and alternative medicine/interventions (CAM/CAI): According to the Center for Complementary and Alternative Medicine (NCCAM, 2014), complementary and alternative medicine/interventions therapies can be classified into five categories:

1. *Alternative medicine systems*: Alternative medicine systems are based on structures that evolved from other cultures and ancient practices including

acupuncture, ayurveda, Native American medicine, naturopathy, traditional Chinese medicine, and Roots.

2. *Mind-body interventions*: Mind-body interventions are techniques designed to enhance the way the mind affects body functions and physical systems. This category includes biofeedback, hypnosis, meditation, prayer, and eye movement desensitization and reprocessing (EMDR).
3. *Biologically based therapies*: Biologically based therapies include herbal and nutritional supplements and homeopathy.
4. *Manipulative and body-based methods*: Manipulative and body-based methods are based on manipulation or movement of certain parts of the body and include massage, chiropractic, reflexology, and Rolfing.
5. *Energy therapies/therapeutic touch*: Energy therapies involve the manipulation of energy fields that surround the body and includes healing touch, bioelectromagnetic therapies, and Reiki.

Conventional medicine: NCCAM defines conventional medicine as medicine practiced by a licensed medical doctor (MD), a doctor of osteopathic medicine (DO) and by allied health professionals such as physical therapists, psychologists, and registered nurses (NCCAM, 2014).

Counselor-in-training: A student enrolled either part time or full time in an accredited counseling program.

Integrative mental health model (IMH): This model is based on the work of Dr. James Lake and “focuses on the ‘whole person’ (i.e., views mind-body and its systems as interrelated), emphasizes the therapeutic relationship between clinician and patient, prioritizes healthy lifestyle, and addresses biological, psychological, cultural, economic and spiritual or religious

factors that affect general well-being and mental health” (Sarris, Glick, Hoenders, Duffy, & Lake, 2014, p. 3).

National Center for Complementary and Alternative Medicine (NCCAM): The NCCAM is a division of the National Institutes of Health. This agency was originally called the Office of Alternative Medicine and was established in October 1998. The agency’s mandate is to “define through rigorous scientific investigation, the usefulness and safety of complementary and alternative medicine interventions and their roles in improving health and healthcare” (NCCAM, 2014).

NADA: The National Acupuncture Detoxification Association

PTSD: Post-traumatic stress disorder is classified as a trauma and stress related disorder in the *Diagnostic and Statistical Manual of Mental Disorders*, 5th Edition (American Psychiatric Association, 2013).

Chapter Summary

This chapter introduced the purpose of this study, which was to examine the attitudes of counselors-in-training towards CAM and CAI. Counselors-in-training personal experience with CAM/CAI interventions and their willingness to incorporate such alternative approaches into counseling practice was also examined. An overview of the increasing awareness and use of complementary and alternative interventions in mainstream health care and counseling was provided. A statement of the problem including the scarcity of research available to offer insight about counselors’ views on CAM and CAI and counselors’ willingness to incorporate these approaches into their counseling practice was explored. An overview of the rationale and theoretical underpinnings, including the emerging IMH model, was also provided. This chapter ended with a description of the justification and significance of the study. The next chapter will

offer a comprehensive review of the relevant theoretical and empirical literature related to the increasing interest in and integration of CAM/CAI into mainstream medical and mental health care.

CHAPTER 2: LITERATURE REVIEW

Introduction to Literature Review

The preceding chapter introduced the research study, which examined the attitudes of counselors-in-training towards CAM and CAI and provided the rationale for why this study is necessary. This chapter presents literature on the growing role of CAM and CAI in the American health care system and the need for medical and behavioral health professionals to incorporate these interventions into assessment and treatment of individuals experiencing mental health and substance abuse concerns. This chapter also examines the shifting paradigm of mental health care and presents the IMH model. Additionally, this chapter explores the uses of CAM and CAI in the counseling profession and how the paradigm of integrative mental health care fits into the profession's standards, training, and professional identity.

Growing Interest in the Mind-Body Connection

In the early 1900s, American science and health care began to shift away from a Cartesian worldview of reductionism in which the soul and the body are seen as separate and independent of each other. This idea is based on the philosophy of Rene Descartes, who believed that there was a divide between the mental and the physical aspects of living beings (Shannon, 2002).

A new, holistic paradigm is developing and with it, there is a changing view of psychology and health care (Mikulas, 2002). Brower (2006), states, "In the past 30 years, however, research into the link between health and emotions, behavior, social and economic status and personality has moved both research and treatment from the fringe of biomedical science into the mainstream." In the late 1980s, a study of women with breast cancer was

conducted at Stanford University to determine if women who participated in a support group reported a higher quality of life. The results of the study showed that not only did they report less pain and higher life quality, but they also lived longer than the women in the control group (Cunningham, Edmonds, Jenkins, Pollack, Lockwood, & Warr, 1998). The positive results of this study were an impetus for further research into the benefit of mind-body techniques as complements for treatment of cancer, AIDS, and other serious and painful medical conditions (Goodwin, Leszcz, Ennis, Koopmans, Vincent, Guther, ... Hunter, 2001).

Public interest in the mind-body connection in the United States surged again in 1991 after Public Broadcasting Service (PBS) aired a program hosted by television journalist, Bill Moyers, called “Healing and the Mind.” This 5-part series was viewed by several million American households and became a catalyst for a national discussion about CAM and CT. In 2006, PBS aired another program focusing on mind-body interventions titled, “The New Medicine,” which was viewed by an audience of more than 2.4 million people. This two-part series was hosted by Dana Reeves and focused on the growing prevalence of integrative care in medical school, health care clinics, research institutions, and private clinics, along with the growing acceptance of holistic medicine in the hospital environment and in the patient-doctor relationship. Contributing institutions for this series included Duke University Medical Center, Blue Shield of California, Drexel University College of Medicine, and the Center for Spirituality and Healing at the University of Minnesota (PBS, 2006).

Empirical Research of Mind-Body Connection

Over the past 30 years, research has supported the link between health and emotions. Research and treatment from a mind-body perspective has shifted from the edge to the mainstream of medical care (Kraft, 2009). Dr. George Solomon was one of the first scientists to

see a link between emotions and immunity. In 1964, Solomon published an article, “Emotions, Immunity and Disease: A Speculative Theoretical Integration” (Solomon & Moos, 1964). Moos and Solomon (1965) also published a study examining the effects of psychological factors such as depression on symptoms of rheumatoid arthritis, and found that patients experiencing psychological stressors such as depression were more likely to experience worsening symptoms of rheumatoid arthritis. According to Solomon (1965), “Mind and body are inseparable. The brain influences all sorts of physiological factors on disease that were once not thought to be centrally regulated” (p. 352). With increasing evidence that emotional and mental stress affect the body’s ability to maintain a healthy state, the Cartesian dichotomy that has separated mind and body since the 17th century is called into question (Nath, 1988).

The work of Solomon and Moos (1964; 1965) influenced the work of Dr. Robert Ader, who coined the term psychoneuroimmunology, which describes the study of links between the mind and the body’s immune system (Ventura, 2009). Ader also conducted a seminal study examining the mind-body connection. In the study, rats were given water laced with saccharin followed by an injection of an immunosuppressant drug that reduced their white blood cell count and also induced nausea. The rats were conditioned to this response over several months and then the same rats were given just the saccharin water without the immunosuppressant drug. Test results showed that their white blood cell count continued to be reduced. The results of this study provided evidence that the immune system can be conditioned and that the mind and the body are able to “communicate” (Ader & Cohen, 1975).

Oakley Ray, Professor Emeritus of Psychology, Psychiatry, and Pharmacology at Vanderbilt University, observed that “According to the mind-body or biopsychosocial paradigm, which supersedes the older biomedical model, there is no real division between mind and body

because of networks of communication that exist between the brain and the neurological, endocrine and immune systems” (Ray, 2004, p. 29).

In the 1990s, physicians in the United States began integrating complementary and alternative interventions into traditional medical care, which represents a broader paradigm that goes beyond the traditional biomedical model that focuses exclusively on biological factors and does not take into account psychological, environmental, social, or spiritual influences.

Integrative medicine (IM) combines modern medicine with evidence-based therapies that address the body, mind, and spirit (Maizes, Rakel, & Niemiec, 2009).

Maizes and colleagues (2009) proposed a set of common principles to guide integrative medicine: (1) Patients and practitioners are partners in the healing process. (2) All factors that influence health, wellness, and disease are taken into consideration, including mind, spirit, and community, as well as body. (3) Appropriate use of both conventional and alternative methods facilitates the body’s innate healing response. (4) Effective interventions that are natural and less invasive should be used whenever possible. (5) Good medicine is based on good science. It is inquiry-driven and open to new paradigms. (6) Ultimately, the patient must decide how to proceed with treatment based on values, beliefs, and available evidence. (7) Alongside the concept of treatment, the broader concepts of health promotion and the prevention of illness are paramount. (8) Practitioners of integrative medicine should exemplify its principles and commit themselves to self-exploration and self-development.

Currently, there are few studies that measure the outcomes of integrative medicine. The studies that exist are qualitative and focus on the patients’ experience within the integrative medicine model. Patient-centered care is a hallmark of integrative medicine, and research

indicates that this model increased patient satisfaction with care, improved outcomes, and reduced the utilization of medical care (Mauksch, Dugdale, Dodson, & Epstein, 2008).

McCaffrey, Pugh, and O'Connor (2007) conducted focus groups at an outpatient integrative clinic to examine patient preferences regarding their medical care. The findings showed that patients believed a combination of CAM and conventional medicine provided better care than each approach separately, particularly when neither option was given higher value than the other. Another qualitative study was conducted at the University of Arizona Center for Integrative Medicine and used focus groups to gather feedback from patients with cancer and life threatening illnesses. In their feedback, 77% of the patients with cancer and 85% of the patients with other ailments described the relationship and attention they received from their health care provider as the most significant difference from conventional health care (Koithan, Verhoef, Bell, White, Mulkins, & Ritenbaugh, 2007). Some comments from the participants in this study included, "Provided alternatives rather than one option, including CAM treatments, and encouraged me to choose what best fit" and, "I had a great relationship with my physician who really heard what I was trying to say" (Koithan et al., 2007, p. 666).

As the use of integrative care increases, there will be a need for outcome research on the integrative model of care and the individual modalities of CAM/CAI treatment. According to Bell et al., 2002, "Clearly there is a critical need for additional outcome research. To date funding has been scarce for these complex and expensive research projects that look at an entire package of care rather than individual elements" (p. 20).

Integrative Mental Health Care Theory

In response to a growing interest in CAM and CAI, an increasing number of medical and mental health professionals are incorporating unconventional treatment approaches into their

practice to help provide comprehensive care to the clients they serve. Integrative mental health care theory is based on the perspective that mental illness and mental discomfort are the result of multiple causes and therefore, multiple approaches to assessment, conceptualization, and treatment are needed in order to assist clients in achieving optimal, holistic well-being that includes concurrent treatment of the mind, the body, and the spirit (Lake, 2012). This emerging paradigm of “mind-body medicine” focuses on merging the long standing bio-psycho-social model with a spiritual component and with evidence-based CAM and CAI (Lake, 2012). Integrated Mental Health care (IMH) utilizes conventional interventions such as pharmacology, counseling, and psychosocial interventions along with alternative interventions such as acupuncture, biofeedback, and herbal supplements (Lake, 2012). Figure 1. provides a visual representation of the integrative mental health model.



Figure 1.

Integrative Mental Health Care Model

Integrative mental health care is an emerging concept that is branching off of integrative medical care. The epicenters of research in this area are located in several well-respected universities and national organizations throughout the United States.

The Consortium of Academic Health Centers for Integrative Medicine was founded in 1999 by eight academic medical institutions who shared a common vision of developing curriculum to support clinical care and research in the field of integrative medicine. This center is located on the campus of the University of Minnesota and receives funding from membership dues, grants, and philanthropic donations. Currently, this consortium has 57 institutional members, and various work groups meet monthly to continue to support and advance the study of integrative health care (www.ahc.umn.edu/cahcim).

Two examples of integrative academic-based medical institutions are located at the University of Arizona in Tucson, Arizona and Duke University in Durham, North Carolina. Both academic institutions are original members of the Consortium of Integrative Medicine, which was founded in 1999. The purpose of the consortium was to create a united effort to expand and further develop the field of integrative medicine Complementary and Alternative Medicine, 2005).

The Arizona Center for Integrative Medicine at the University of Arizona was founded in 1994 by the well-known doctor, herbalist, author, and public figure, Andrew Weil, MD, and touts itself as, “leading the transformation of health care by creating, educating, and actively supporting a community that embodies the philosophy and practice of healing-oriented medicine, addressing mind, body and spirit,” (integrativemedicine.arizona.edu). The integrative medicine curriculum is incorporated into the standard three-year family medicine residency programs, in which medical residents learn to incorporate integrative medicine concepts into their practices,

including patient-centered care techniques that help facilitate lifestyle change (integrative medicine.arizona.edu).

Duke University's Center for Integrative Medicine was founded in 1988 and describes its approach to medical care as one, "that brings patient and practitioner together in a dynamic partnership dedicated to optimizing the patient's health and healing. This approach focuses on the whole person, recognizing that the subtle interactions of mind, body, spirit and community have a direct impact on vitality and well-being" (dukeintegrativemedicin.org). A description of the medical training offered at Duke offers this perspective, "The Institute of Medicine recommends that health profession schools should incorporate sufficient information about (CAM/CAI) into the standard curriculum at the under -graduate, graduate, and postgraduate levels to enable licensed professionals to competently advise their patients about CAM" (dukeintegrative medicine.org).

The study of complementary and alternative health care is also supported by the United States government. Congress established the Office of Alternative Medicine in 1992. In 1999 it was renamed the National Center for Complementary and Alternative Medicine (NCCAM). The NCCAM is one of 27 agencies that are part of the National Institutes of Health (NIH), which is part of the U.S. Department of Health and Human Services (<https://nccih.nih.gov/>). The mission statement of NCCAM is "to define, through rigorous scientific investigation, the usefulness and safety of complementary and alternative medicine interventions and their roles in improving health and health care" (NCCAM, 2014). In December, 2014, the name of this agency was changed from the NCCAM to the National Center for Complementary and Integrative Health (NCCIH). According to an announcement on the NCCIH website, this new name was chosen to reflect the growing use of an integrative approach to health and wellness in health care settings

across the United States. The director of the NIH, Francis S. Collins, MD, PhD, states, “This change by Congress reflects the importance of studying the approaches to health and wellness that the public is using, often without the benefit of rigorous study.” The structure, funding, and mission of this agency remains the same as it was under its previous name of NCCAM (NCCIH, 2015).

Complementary Therapies

The NCCIH (formerly known as the National Center for Complementary and Alternative Medicine) utilizes the terms complementary medicine, alternative medicine, and integrative medicine to describe modalities and approaches developed outside of conventional health care (NCCIH, 2015).

The terms “complementary” and “alternative” are often used interchangeably but each term has a specific meaning. “Complementary” refers to the use of non-mainstream approaches *along with* conventional approaches to care, and “alternative” refers to using non-mainstream approaches *in place of* conventional approaches to care. The term “integrative medicine” is defined as a combination of conventional and non-mainstream health care approaches that focuses on treating the “whole person,” and emphasizes wellness, health, and a positive relationship between the patient and the health care provider (NCCIH, 2015).

Categories

The five categories of complementary therapies recognized by NCCAM (2014) are: 1) alternative medicine systems, 2) mind-body interventions, 3) biological based therapies, 4) manipulative and body-based methods, and 5) energy therapies. Within each category there are multiple modalities and products. Some categories have been researched more thoroughly than others and are considered closer to conventional rather than complementary.

Alternative medicine systems include acupuncture, ayurveda, homeopathy, Native American medicine, naturopathy, traditional Chinese medicine, and Roots. These systems are based on practices and philosophies outside of Western medicine. For example, ayurvedic medicine has been used in India for more than 5,000 years and focuses on using herbal remedies and practices such as yoga and meditation to prevent illness and promote health (Krishnamurthy, 2007).

Another alternative medicine system, acupuncture, has been practiced in China and other Asian countries for several thousand years and is a key component in traditional Chinese medicine. Acupuncture is based on the idea that living beings have an energy known as Qi and keeping this energy balanced is essential to maintain optimal health (NADA, 2012). Acupuncture uses a thin needle to penetrate the skin to stimulate key points that are attached to organs and systems within the body (NCCIH, 2015). In the United States, acupuncture is most often used to help manage symptoms of acute and chronic pain, but recent studies show evidence that acupuncture is effective in treating symptoms of drug and alcohol withdrawal, insomnia, anxiety, and symptoms associated with post-traumatic stress disorder (Chon & Lee, 2013). The results of a 2007 National Health Interview Survey showed that approximately 3.1 million adults and 150,000 children in the United States received an acupuncture treatment in the previous year (Barnes, Bloom, & Nahin, 2008). A study conducted at the Mayo Clinic found that acupuncture is an effective treatment in reducing symptoms associated with fibromyalgia such as fatigue and anxiety (Mayo Clinic, 2006).

A second category of complementary therapy focuses on the mind's influence on body systems. This system is classified as mind-body interventions and includes biofeedback, hypnosis, prayer, meditation, and eye movement desensitization and reprocessing (EMDR).

The popularity of mindfulness meditation has recently increased due to research supporting the efficacy of this practice in helping people address health issues such as stress, substance abuse, and heart disease (Edenfield & Saeed, 2012). Mindfulness meditation is based on ancient Buddhist practices that focus on calming the mind in order to achieve an increase in clarity. Mindfulness is a simple technique that can be self-taught and is applicable to improving physical and emotional well-being. Researchers' interest in mindfulness practice is on the increase as studies begin to reveal its beneficial effects (marc.ucla.edu). For example, Flaxman and Flook (2012) conducted a study at the University of North Carolina, Chapel Hill and found a strong positive correlation between mindfulness practice in couples and enhancement in their emotional connection with each other.

A third category identified by NCCAM is biologically based therapies, which include herbal and nutritional supplements, and homeopathy. The Centers for Disease Control and Prevention conducted the 2012 National Health Interview Survey and found that the most commonly used complementary therapy was natural products (identified as dietary supplements other than vitamins or minerals) with 17.7% of adults and 4.9% of children reporting use (Clarke, Black, Stussman, Barnes, & Nahin, 2015). The most popular product among adults was fish oil with 7.8% of adults reporting use. Furthermore, several studies have shown that fish oil is an effective complementary intervention for treatment of mild to moderate depression (Gertsik, Poland, Bresee, & Rapaport, 2012; Li, Dai, Ekperi, Dehal, & Zang, 2011; Tajailizadekhoob, Sharifi, Fakhrzadeh, Mirarefin, Ghaderpanahi, Badamchizade, & Azimipour, 2011). Fish oil is also a rich source of omega-3 fatty acid, which positively affects brain function of individuals experiencing depression (Nemets, B., Stahl, Z. & Belmaker, R.H., 2002).

The fourth NCCAM category of CT is manipulative and body-based methods, which include techniques of manipulation or movement of certain parts of the body such as massage, chiropractic, reflexology, and Rolfing. Results of the 2012 NHIS study found that 8.4% (19.4 million) of United States adults used chiropractic care and 6.9% (15.4 million) used massage therapy (Clarke et al., 2015). In fact, chiropractic care and massage therapy are the most popular in this category, and the historic use of these techniques can be traced back well over a thousand years (Barnes, Bloom, & Nahin, 2008). A pilot study conducted by Juberg et al. (2015) evaluated the effect of Swedish massage on 25 veterans with symptomatic knee osteoarthritis (OA). Results of the study found a significant improvement in self-reported OA-related pain and knee pain. The preliminary data show Swedish massage to be a feasible and acceptable intervention for reducing knee pain related to OA.

The fifth category of CT identified by NCCAM is energy therapies/therapeutic touch. These are therapies such as healing touch, bioelectromagnetic therapies, and Reiki that focus on manipulation of energy fields that surround the body to increase physical, mental, emotional, and spiritual well-being (NCCAM, 2014). Energy therapies and therapeutic touch are often associated with Eastern or “New Age” belief systems, although most practitioners do not expect patients to abandon Western belief systems or spiritual practices in order to gain positive results from this type of treatment. Reported benefits from this category of modalities include lowered blood pressure, improved quality of sleep, pain management, and an overall improvement in physical vitality (Gordon et al., 1998; Rosa et al., 1998). Kundu, Lin, Oron, & Doorenbos (2014) conducted a double-blind, randomized controlled study of children undergoing dental procedures (n=38) and found no significant difference between the experimental group and the control group. In contrast, Thrane and Cohen (2014) conducted an in-depth literature review to calculate

the effect of Reiki on pain management and anxiety. They examined 49 articles and 12 received a full review; the results indicated that Reiki therapy may be effective for treatment of pain and anxiety, warranting additional research.

Complementary Therapy Integration Among Medical Professionals

Historically, medical professionals have not received formal education or training in CAM/CAI interventions or in an integrative model of medical care. Often, patients view conventional medical providers as having a bias against CAM/CAI (Klatt, Sierpina & Kreitzer, 2010). With a growing public interest in alternative treatments, medical schools have begun developing curriculum focusing on integrative medicine that combines both conventional and CAM/CAI approaches to treatment (DeSylvia et al., 2011).

A major impetus in propelling the integration of CAM into health professions training curricula was the *Complementary and Alternative Medicine (CAM) Education Project*. This project awarded 14 colleges of nursing and medicine and one medical student foundation financial support to integrate CAM training into their curriculum. This project was funded by NCCAM from 2000 through 2008 (NCCIH, 2015). A description of the original grant was released by NCCAM in December 1999. NCCAM's intention was described as "playing a protective role in accelerating this process by supporting the development, refinement and expansion of innovative new educational approaches to incorporate CAM information into the medical, dental, nursing, and allied health professional school curriculum, into residency training programs, and into Continuing Education (CE) courses" (NCCAM, 2014).

Gaylord and Mann (2007) reviewed the rationales used by the 15 National Center for Complementary and Alternative Medicine educational grantees in their original proposals for incorporating CAM content into conventional health professions training programs. The results

uncovered the following themes: (a) prevalence and growth of CAM in the United States, (b) response to governmental, legislative, and other mandates, (c) need for enhanced communication between conventional providers and patients using CAM, (d) need to enhance safety of CAM use and interactions with conventional care, (e) CAM education's positive impact on broadening core competencies for conventional health care professionals, (f) positive impact on enhancing cultural competency, (g) need for better communication between conventional and CAM providers, (h) potential for improving health care coordination, (i) potential impact on increasing CAM research quality and capacity, and (j) potential for enhancing quality of care through informed CAM use (p. 927). Gaylord and Mann (2007) conclude, "Integration of CAM with conventional health care requires educational venues that prepare conventionally trained caregivers with a sufficient knowledge base for assessing beneficial and detrimental interactions between CAM and conventional care approaches, development of criteria for making informed referrals to CAM practitioners, and enhanced research capacity" (p. 927).

The medical profession views CAM/CAI practices as relevant and increasingly essential to health care and health care education. In keeping with this developing paradigm, counseling professionals can anticipate encountering some of the same challenges identified by medical providers, such as clients who are seeking information and advice about CAM/CAI practices, clients who are utilizing CAM/CAI for mental health issues, and the need for coordination of services among providers.

Complementary Therapy Integration and the Counseling Profession

There is sparse research surrounding the topic of counseling and complementary therapies (CTs). What is available focuses on wellness and multicultural competencies rather than integrating CTs in counseling practice. Counseling professionals typically do not identify

with the traditional biomedical model, which takes a problem-focused approach to health (Armentrout, 1993). Instead, counselors take a holistic view of treatment, much like that found in the Integrative Medical and Mental Health care model. Despite this holistic focus, the counseling profession remains disconnected from the growing trend toward implementing an integrative approach to treatment.

Education and Training

There is evidence that CAM/CAI interventions are not yet recognized as mainstream practices by the counseling profession and are not included in required counselor education curriculum or continuing education, or used by the majority of professional counselors with the same legitimacy or confidence as more traditional counseling techniques (Baruch-Runyon, 2009; Lumadue et al., 2005).

For example, the webpage for the American Counseling Association describes the 2015 Conference and Exposition as, “the largest professional development event for counselors in the world with more than 4,000 attendees” (ACA, 2014). The webpage also states that more than 50% of the conference attendees are influencers and decision makers at their workplace. An examination of the conference program revealed that 13 programs out of more than a hundred contained language or topics related to CT (i.e., mindfulness, yoga, neurofeedback, spirituality, and breath assessment). Additionally, none of the programs mentioned integrative care.

A qualitative study completed by Auxier et al. (2003) examined the professional development and identity formation of eight second-year counseling students enrolled in programs accredited by the Council for Accreditation of Counseling and Related Educational Programs. This study provided evidence that the attitudes and behaviors that students developed through the academic learning process were heavily influenced by the encouraging and

discouraging messages they received from faculty, supervisors, and classmates. This effect could potentially play a role in how students view the use and level of professional acceptance of complementary therapies (CTs).

Professional Identity

The Council for Accreditation of Counseling and Related Educational Programs (CACREP) is an accrediting body for master's and doctoral degree programs in counseling and specialty areas (addictions counseling, career counseling, clinical mental health counseling, marriage, couple, and family counseling, school counseling, student affairs and college counseling, and counselor education and supervision; CACREP website). The CACREP focuses on foundations, knowledge, and skills (CACREP, 2009). The counseling profession has a history of fragmentation and lack of uniformity in professional identity, licensure standards, and portability of licenses. The CACREP accreditation process provides common standards for the counseling profession and increases quality care by helping the profession move toward unified requirements for licensure (Mascari & Webber, 2013). There are eight standards established by CACREP that guide core curricular experiences provided within counselor education programs. Included in these standards is the requirement of "facilitating optimal development and wellness over the lifespan" (CACREP 2009, p.10) and "an orientation to wellness and prevention as desired counseling goals" (CACREP, 2009, p.11).

The CACREP standards align with a major component of integrative medicine; the focus on prevention and paying attention to the body's health rather than waiting for the development of disease (Maizes et al., 2009). The professional standards of CACREP identify wellness, prevention, and self-care as essential components of a counselor education program, yet there is no evidence that the counseling profession is exploring the role that an integrative model with an

inclusion of CAM/CAI might play in helping counselors-in-training to develop these characteristics.

Professional Ethics

The American Counseling Association (ACA) *Code of Ethical Standards of Practice* guides the practice of the counseling profession and provides an overarching set of ethical standards for counselors and counselors-in-training to follow. This code is reviewed and revised every 7 to 10 years to reflect current trends in the profession. According to Marcheta Evans, past president of ACA, “The *ACA Code of Ethics* helps to define who we are, how we operate and how we function as counselors” (Rollins, 2011).

When the ACA revised the *Code of Ethical Standards of Practice* in 2005, it placed emphasis on attending to multiculturalism and diversity because these areas were becoming more prevalent in the counseling process and previous versions of the code of ethics had not addressed them specifically (Rollins, 2011). While this code provides detailed information and guidance to practicing counselors and counselors-in-training, there is nothing specifically stated about use of CAM/CAI and leaves the use of complementary interventions within the counseling process open to interpretation.

The ACA Code of Ethical Standards of Practice was revised most recently in 2014 and, according to David Kaplan, ACA’s chief professional officer and staff liaison to the ACA Ethics Revision Task Force, “the revised code makes it clear that we have completely made the transition as a profession from focusing on the needs of the counselor to the needs of the client – that our clients are more important than we are” (Meyers, 2014). The major focus of this revision is the ethical use of technology and social media with clients. There is no update or revision that addresses the use of CAM/CAI or integrative care, which is an indication that this topic has yet

to become a mainstream issue to an important and influential governing body within the counseling profession.

A study conducted by Evans et al. (2002) surveyed 151 mental health practitioners about their views toward using brief and nontraditional approaches in their practice. The participants were randomly selected from a membership list of practitioners registered with the ACA – Southern Region. Participants were asked to complete a survey consisting of four domains designed to assess participants' attitudes towards brief therapies and non-traditional therapies. The four domains were: 1) demographic information, 2) attitudes toward nontraditional clinical practices, 3) impressions of brief therapeutic practices, and 4) qualitative questions about the participants' attitudes toward brief therapeutic practice and use of non-traditional therapies.

The questions about nontraditional therapies focused on practitioners' perceptions of non-traditional therapies and practitioners' perceptions of clients' attitudes toward nontraditional therapies. In answer to the question, "Have you ever used any alternative or nontraditional therapies in your practice? If so, which ones?" 72% (n=109) replied yes. In answer to the question, "How have your clients responded to your use of alternative therapies or to your suggestions about using them to complement traditional therapies?" 85% (n=83) reported positive responses from clients. One of the qualitative questions asked was, "What ethical concerns do you have concerning the use of nontraditional therapeutic techniques?" The most common responses from the practitioners were a lack of appropriate training, a lack of scientific evidence to support the nontraditional modality, and a lack of personal knowledge about certain modalities. Other issues that emerged were concerns about licensure and scope of practice, concerns that a nontraditional therapist would intentionally or unintentionally misuse these

approaches or not follow ethical guidelines, and ethical concerns about touching clients (in the context of using touch therapies; Evans et al., 2002).

Similar to Evans and colleagues (2002), Becvar, Caldwell, and Winek (2006) conducted a mixed methods study examining the relationship between marriage and family therapists and complementary and alternative medicine. Data was obtained from the qualitative analysis of telephone interviews with 54 respondents who were clinical members of the American Association of Marriage and Family Therapists. One of the questions in the survey asked, “What are the ethical issues you have considered related to the use of CAM in family therapy?” The most common concern expressed by practitioners was making sure they were practicing within their scope of practice and limits of their competence (Becvar et al., 2006).

As reflected in the survey results just mentioned, counselors who would like to use or to recommend a CAM/CAI intervention as part of the counseling process have limited guidance on how to proceed. Many states do not require an individual to be licensed or certified to practice alternative therapies. However, once the person obtains a license as a counseling professional, controversy develops as to whether it is appropriate for the counselor to practice the alternative therapy under the scope of his or her professional practice (Caldwell et al., 2006). The counseling profession does not specifically state what extra training is required to be considered “reasonably” competent to perform the services (ACA, 2014). Therefore, determining what is considered a reasonable standard of care in this area is complex due to the lack of specific guidance from professional organizations and codes of ethics.

Within Section C of the *ACA Code of Ethical Standards of Practice* (2014) addressing professional responsibility, two subsections are applicable to counselor’ relationship with CAM/CAI modalities. Subsection C.2.f addresses continuing education and states, “Counselors

recognize the need for continuing education to acquire and maintain a reasonable level of awareness of current scientific and professional information in their fields of activity. Counselors maintain their competence in the skills they use, are open to new procedures, and remain informed regarding best practices for working with diverse populations” (p. 9). Additionally, subsection C.7.b. focuses on development and innovation and states, “when counselors use developing or innovative techniques/procedures/modalities, they explain the potential risks, benefits, and ethical considerations of using such techniques/procedures/modalities. Counselors work to minimize any potential risks or harm when using these techniques/procedures/modalities (p 10).

Both of these sections of the *ACA Code of Ethical Standards of Practice* (2014) contain language in support of ongoing training and inclusion of new modalities in professional practice. However, there is no specific mention of “alternative” or “complementary” in the *ACA Code of Ethical Standards of Practice*, leaving counselors without professional support or guidance for determining how to best integrate CAM/CAI modalities in the counseling process.

Research on Counseling and CAM/CAI

There continues to be a growing interest and utilization of complementary therapies, which indicates that the integrative approach to care is more of a reflection of society’s evolving beliefs rather than a popular trend (Evans et al., 2002). There is limited research on CAM/CAI and counseling overall. The current literature mainly focuses on specific CAM/CAI modalities and their effectiveness in treating individual with specific disorders. Within the counseling profession, most research related to CAM/CAI focuses on the use of particular modalities with counselors-in-training to promote self-care practices. Several qualitative studies examining

attitudes of counselors towards CAM/CAI have recently been published, but this area remains relatively unexplored.

Self-Care in Counselor Training

Shapiro, Brown, and Biegel (2007) conducted a study using a nonrandomized cohort-controlled design on the effectiveness of mindful-based stress reduction (MBSR) in teaching self-care to counselors-in-training. The study participants consisted of 54 master's level counseling psychology students enrolled in a small, private Jesuit university. Demographic data provided about the participants showed the mean age was 29.2 years; 88.9% identified as female and 76.9% identified as Caucasian. The participants were enrolled in one of three graduate courses: Stress Management, Psychological Theory, or Research Methods. The students enrolled in the Stress Management course received an intervention and the students enrolled in the other two courses served as the control group. All participants were administered the Mindfulness Attention Awareness Scale (MAAS; Brown and Ryan, 2003) at the beginning of the study and again at the completion of the eight-week intervention. Participants in the intervention group were also asked to keep a daily mindfulness practice diary during the eight weeks of the study. A 2 x 2 mixed factorial ANOVA was conducted on each outcome variable with the alpha level set at < 0.05 significance. Participants in the MBSR treatment group showed a significant improvement in all seven outcomes in comparison to the control group. These outcomes included clients' perspectives on a decrease in stress, negative affect, rumination, state and trait anxiety, and an increase in positive affect and self-compassion. Limitations of this study include that the sample size was small and most of the participants were Caucasian females. The participants all attended a small, Jesuit-based college, bringing into question the generalizability of the results. Additionally, the study design was not a randomized sample. The positive results of this study do

support the benefits of mindfulness training for mental health professionals, which may in turn increase their interest in utilizing this technique in the counseling process with clients.

Counselor Attitudes Toward CAM/CAI

Nichols (2015) conducted a grounded theory study examining the use of complementary therapies (CT) with 16 professional counselors across the United States. The participants had at least a master's degree in counseling and identified that they were currently using mind-body techniques in counseling sessions. The three main questions of the study were: (1) How do counselors integrate CTs into practice? (2) What factors influence counselors' knowledge, attitudes, and behaviors toward CTs? and (3) What are counselors' perceptions of the effectiveness of CT use in sessions? (Nichols, 2015, p.30).

Nichols' (2015) results led to the development of a conceptual model of counselor integration of CT in professional counseling practice. This model identifies four categories that emerge in the following order within the model: (1) Experience with CT, which is described as "the initial awareness participants gained as a result of using CT." (p. 30) (2) Beliefs Creating Openness to CT, which includes intuition, a recognition of the mind-body connection, and the importance of creativity in the counseling process. (3) Development of CT Competence, which is defined as, "the knowledge and ability necessary to use a skill appropriately." (4) Reinforcement of CT Use in Professional Practice, which focuses on the selection process and utilization of CT modalities in the professional's practice of counseling (Nichols, 2015). This model, identified as the Theoretical Model for CT Integration in Counseling, offers a framework for understanding how experiences, beliefs, competence, and practice affect the integration process and influence the counseling profession, and emphasizes the counseling profession's alignment with a prevention model of care (Mellin, Hunt, & Nichols, 2011; as cited by Nichols, 2015).

The beliefs expressed by the participants in Nichols (2015), particularly in the mind-body connection and the holistic belief that one's state of health is dependent on all aspects of a person connecting together, are also reflected in the integrative mental health model, which is also a holistic model of care focusing on treatment of the mind, body, and spirit (Lake, 2012).

There is minimal research in the field of counselor education to address the growing interest in CAM/CAI. This study builds on Nichols's research by examining counselors-in-training regarding their attitudes, personal experience, and willingness to incorporate CAM/CAI into clinical practice.

Caldwell, Winek, and Becvar (2006) examined the relationship between marriage and family therapists (MFTs) and complementary and alternative medicine approaches. A random sample of 1000 clinical members of the American Association of Marriage and Family Therapists (AAMFT) was selected out of a population of more than 23,000 members and they were asked to complete a questionnaire. The data collected assisted in answering the following research questions: (a) Are MFTs aware of serving clients who utilize CAM practices? (b) How have MFTs included CAM practices into their clinical work? (c) If MFTs have incorporated CAM practices into their clinical work, with what types of clients and client problems have these practices been implemented? and (d) How did MFTs learn to implement, refer to other practitioners, or integrate these practices into their clinical model?

There were 424 participants ($n = 424$). There were slightly more females (57%, $n = 239$) than males (43%, $n = 182$). The average participant age was 57 years with close to 19 years of post-training practice. The majority of the participants (65%) indicated they saw clients in a private practice setting. The data were analyzed using a discriminate analysis process and results were interpreted in relation to each research question.

The first research question focused on whether MFTs are aware of serving clients who utilize CAM practices. A majority of participants reported knowledge of numerous CAM practices and also indicated that they recommend CAM to clients. The second research question examined how MFTs incorporate CAM practices in clinical work. Approximately 20% of the participants identified themselves qualified to practice or teach a CAM modality, which included relaxation techniques, guided imagery, meditation, diet/lifestyle changes, hypnosis, and prayer therapies. The third research question explored the types of clinical issues that MFTs address with CAM therapies. The most common clinical issues that prompted referrals to CAM providers were pain, anxiety, depression, and a variety of other psychological and emotional difficulties. The fourth research question examined how MFTs integrate CAM into their clinical model of care. The analysis of responses indicated that most practitioners become comfortable and competent with CAM therapies through their own experiences and personal exploration.

Caldwell and colleagues' (2006) study was the first of its kind and collected data from a large number of MFTs throughout the country. A limitation is that the participants self-selected to participate, which may have led to a bias of self-selection of clinicians who were favorable towards the use of CAM in the therapy process. The authors also expressed an interest in conducting another study to include participants who are not members of AAMFT since that organization accounts for only approximately 40% of MFTs practicing in the United States. The authors conclude by stating, "Given the results of this study, it is apparent that many MFTs and their clients are making recourse to various CAM approaches. It therefore behooves us as a field to continue our involvement in this realm in as responsible a manner as possible....Just as MFTs responded to the call for practice models combining family therapy and family medicine, the time may have come for a similar response to CAM (Caldwell et al., 2006, p. 112).

Counseling and Integrative Mental Health Care

Currently, there is no research connecting the integrative mental health care model and counseling. Collinge Wentworth, and Sabo (2005) conducted a study focusing on integrating complementary therapies into community mental health practices. Although the term “integrating” is used, there is no connection to an integrative model of care as proposed by Lake (2006). The premise of integrative mental health as proposed by Lake (2006; 2012) is that mental health treatment should consist of a multimodal approach to client care and include traditional, evidence-based modalities as well as newer models that incorporate CAM/CAI. Lake (2006; 2012) is a psychiatrist and his research and writing focus on neuroscience and medical interventions for clients with mental health issues. However, the IMH model seems to fit well with the counseling profession’s view of holistic and wellness focused care. Additionally, as pointed out by Berger (2011), “this model (IMH) seems to be one of the first models to rigorously examine the evidence and begin proposing mental health treatment protocols which organize the disparate CAM treatments” (p. 6).

Berger (2011) is the first to write about the connection between counseling and Lake’s IMH model (Lake, 2006). Berger (2011) proposes that the counseling profession has long struggled to find a balance between a holistic model of care and interventions that are testable and can be measured empirically. According to Berger (2011), “as research methods evolve, and as more clients seek out adjunctive or replacement therapies in CAM, the field of counseling can only expand and grow as the field embraces its call to holism and optimal mind-body-spirit wellness” (p. 8).

Through exploration of the connection between the counseling field and the IMH model, Berger (2011) identified several clinical implications, applications, and ethical concerns. One

proposal is that counselors engage in a treatment team approach in order to integrate CAM/CAI providers into the counseling process. This approach is already used in the counseling process when dealing with complex cases that require multiple treatment providers (Boon, Verhoef, O'Hara, & Findlay, 2004). Berger (2011) suggests, "this material could also be useful for faculty who teach counseling theory and practice or clinical case conferences to better prepare them for this seemingly new chapter in the evolution of counseling and mental health" (p. 7).

Berger (2011) proposes three methods for counselors to utilize when incorporating the IMH model into practice. The first method is for counselors to establish reliable networks of CAM/CAI providers in their community who are willing to participate in a treatment team approach to client care. The second approach is for counselors to incorporate an integrative intake process to determine if clients are currently participating in CAM/CAI treatments or are interested in learning more about potential options for treatment. The third approach is for counselors to consider becoming trained in integrative care modalities such as mindfulness, hypnosis, breathing and relaxation techniques, or guided imagery. Berger (2011) concluded by identifying two potential ethical concerns for counselors to consider when using the IMH model. One concern is making sure to protect client confidentiality when using a treatment team model and the other is to establish guidelines for counselors who are trained in a CAM/CAI therapy and are integrating this along with counseling. This last concern fits well with the previous section on ethics and calls for professional counseling organizations, such as the ACA, to establish guidelines to assist counselors-in-training, practicing counselors, and counselor educators in navigating this newly developing model of care.

Chapter Summary

The medical and nursing professions are advancing the use of CAM/CAI in medical settings by moving forward in the development of an integrative model of care and including CAM/CAI in student training. To date, there is a gap in research of this type focusing on the attitudes, knowledge, and personal use of counselors-in-training toward CAM/CAI. In order for counselors to provide person-centered treatment, at a time when clients and the broader medical and behavioral health fields are utilizing CAM and CT, counselors and counselors-in-training need guidance to understand the benefits and appropriate uses of CAM/CAI and how these interventions can be integrated in mental health care.

This chapter presented literature on the growing role of CAM and CAI in the American health care system and the need for medical and behavioral health professionals to incorporate these interventions into assessment and treatment of individuals experiencing mental health and substance abuse concerns. This chapter also examined the shifting paradigm of mental health care and presented the integrative mental health model. Additionally, this chapter explored the uses of CAM and CAI in the medical and the counseling professions and how the paradigm of integrative mental health care fits into the counseling profession's standards, training, and professional identity.

The following chapter will describe the methods for this study, and will examine the attitudes and knowledge of counselors-in-training towards CAM/CAI and how personal experience with CAM/CAI modalities affects willingness of counselors-in-training to incorporate complementary/alternative interventions in the counseling practice.

CHAPTER 3: METHODS

Introduction

The purpose of this study is to examine the attitudes and knowledge of counselors-in-training towards CAM/CAI. This chapter discusses the research methods and procedures that will be implemented in this study. This chapter includes a description of the research questions, the research design and procedures, the population, the sample and the sampling procedures, and instrumentation. Additionally, this chapter will address ethical considerations related to this study.

Research Questions

There is a shortage of research examining CAM/CAI in counseling. Specifically, research is limited in the area of counselors' -in-training attitudes towards CAM/CAI and the variables that affect their willingness to incorporate CAM/CAI in their future clinical practice. To explore these issues, the current study examined the following research questions:

Research Question 1: What is the relationship between the demographic variables (including age, gender, program, ethnicity, disability status, and completed credit hours) and general attitudes towards CAM/CAI (scale one) on the *Revised Survey of Knowledge and Attitudes of Counseling Students Toward CAM/CAI – General Attitudes scale*.

Research Question 2: What is the relationship between the demographic variables (including age, gender, program, ethnicity, disability status, and completed credit hours) and classification of CAM/CAI interventions as alternative or mainstream (scale three) on the *Revised Survey of Knowledge and Attitudes of Counseling Students Toward CAM/CAI – Mainstream or Alternative scale*?

Research Question 3: Is there a relationship between personal use of CAM/CAI practices (scale four) and willingness to incorporate CAM/CAI approaches into counseling practice (scale five)?

Research Design

This research was conducted using an exploratory descriptive design. This type of design is appropriate when there are few or a limited number of earlier studies to use as a reference. This type of study is also useful for gathering background information and establishing future research priorities (Brink & Wood, 2001). The data for this study were collected using a paper and pencil survey administered face-to-face in a group setting. There are several advantages to conducting a written, face-to-face survey, including an increased likelihood that the demographic information will be accurate and also that the interviewee will stay focused and complete the survey due to a decrease in external distractions. Some disadvantages to this type of survey administration include the task of manual data entry and also a limited sample size due to a limited number of qualified respondents within a specific geographic area (Fowler, 2008).

There is currently a limited amount of research examining attitudes and knowledge and personal use of CAM/CAI within the field of counseling and also within counselor education curricula (Berger, 2011). This study describes counselors'-in-training attitudes and personal experiences with CAM/CAI and attempts to predict their willingness to use CAM/CAI techniques in future counseling practice.

Population

The participants included full-time and part-time counseling students who are enrolled in a CACREP accredited master's Counselor Education program, a CACREP accreditation-in-progress master's in Substance Abuse and Clinical Counseling program, and a Council on

Rehabilitation Education accredited master's in Rehabilitation and Career Counseling program within the same university in North Carolina. The Counselor Education program is a 60-credit-hour degree program, including 3 credit hours of practicum and 6 credit hours of internship. The Substance Abuse and Clinical Counseling program and the Rehabilitation and Career Counseling program are both 62-credit-hour programs including 4 credit hours of practicum and 12 credit hours of internship.

In order to be included in this study, the participants were enrolled in one of these programs. Participation in the study was voluntary and study participants did not receive any remuneration for their participation.

Sample and Sampling Procedure

Participant selection was accomplished using the convenience sampling method. Convenience sampling is a non-probability sampling method and makes the assumption that the population is homogeneous and contains individuals who share similar characteristics (Trochim, 2006). The use of convenience sampling allowed the inclusion of members of the population who were willing to participate in the study. The 93 eligible participants who agreed to participate in this study were part-time or full-time students currently enrolled in a master's level counselor education program.

Instrumentation

The questionnaire used in this study was the *Revised Survey of Knowledge and Attitudes of Counseling Students Toward CAM/CAI (SKACST-CAM/CAI)*. The *SKACST-CAM/CAI* is a shortened version of the *University of Minnesota Academic Health Center Complementary and Alternative Medicine (CAM) Survey of Knowledge and Attitudes of Health Professions Students* (Haltermann-Cox et al., 2008). The *SKACST-CAM/CAI* was adapted to this current study by

changing the identifier language to reflect counseling and reordering the questions so the questions directly affecting the research questions of the study appear at the beginning of the survey. (Appendix A.) Additionally, the scale titled “Resources,” which asked participants to identify specific methods that would prepare them to advise patients on the use of alternative medicine therapies, was removed from this version of the survey because it was not relevant to this current study.

The *SKACST-CAM/CAI* consists of six scales. For the purpose of this study, only data collected from scales 1, 3, 4, and 5 were analyzed. The first scale is *General Attitudes Toward Complementary and Alternative Medicine (CAM) or Complementary and Alternative Interventions (CAI)*. There are eleven items in this section that are answered with a Likert scale response. The original version had a six-point Likert scale (1 = Very Strongly Agree, 2 = Strongly Agree, 3 = Agree, 4 = Disagree, 5 = Strongly Disagree, 6 = Very Strongly Disagree, x = a neutral response) (Kreitzer, Harris, & Shandeling, 2002). The original order of the rating scale for this section was 1 to 6, with “1” being the most positive response, “6” being the most negative response, and “x” representing a neutral response. To improve on the quality of the original psychometric and for ease of interpretation, the Revised General Attitudes Scale was created, in which the scale was reversed so that the highest scores reflected positive responses toward CAM/CAI. Additionally, reversed scoring was used for negatively worded items such as, “CAM/CAI is a threat to public health” and “While few CAM/CAI approaches may have limited health benefits, they have no true impact on treatment of symptoms, conditions, and/or diseases.” Also, the neutral response on the revised scale was given the value of 3.5 rather than “x” to aid in scoring. This scale is designed to measure participants’ attitudes toward CAM/CAI interventions use in the treatment process; it helped answer the three research questions in the study and was

used to answer the first research question, “*What is the relationship between the demographic variables and the data gathered from Scale 1?*” The possible total scores on this scale range from 11 to 66. A total score of 11 represents the most negative attitude toward CAM/CAI while a total score of 66 represents the most positive score toward CAM/CAI.

The second scale used in this study is titled *Revised CAM/CAI Approaches: Alternative or Mainstream*. There are twelve modalities of CAM/CAI listed (acupuncture, biofeedback, chiropractic, herbal medicine, homeopathy, bioelectromagnetic therapy, hypnosis/guided imagery, massage, nutritional supplements, prayer/spiritual healing, meditation, and therapeutic/healing touch). The original range of responses for this scale was 1 = Clearly Mainstream, 2 = Neither Clearly Mainstream nor Alternative, 3 = Clearly Alternative, and x = Unfamiliar with This Modality. I was uncertain about how “x” should be scored on the scale. Twelve crosstabs analyses, one for each modality, were conducted to examine the relationship between “approaches” and the different CAM/CAI treatments. Based on the results of this analysis, it was clear that “Unfamiliar with This Modality” conveyed a more extreme perception than “Clearly Alternative,” so the Revised CAM/CAI Approaches was coded as “4” to represent a place in the continuum as more extreme than “Clearly Alternative.” The responses to these questions assisted in answering the second research question, “*What is the relationship between the demographic variables and the data from the third scale?*” The possible total score on this scale range from 12 to 48, with a score of 12 indicating a view of all modalities as “clearly mainstream” and a score of 48 indicating a view of all modalities as beyond “clearly alternative.”

The third scale used in this study is titled *Personal Use* and contains the same 12 modalities listed in the second scale (acupuncture, biofeedback, chiropractic, herbal medicine, homeopathy, bioelectromagnetic therapy, hypnosis/guided imagery, massage, nutritional

supplements, prayer/spiritual healing, meditation, and therapeutic/healing touch) and is designed to be answered “yes” or “no” with a response of “yes”=1 and a response of “no”= 0. This scale provided the data needed to answer the third research question, “*Is there a relationship between personal use of complementary and alternative interventions and the willingness of counselors-in-training to incorporate complementary and alternative interventions into counseling practice?*” The possible total score on this scale ranged from 0 to 12 with a score of 0 indicating no personal use of any of the modalities listed and a score of 12 indicating personal use of all the modalities listed.

The fourth scale used in this study is titled *Revised CAM/CAI Approaches in Your Practice*. The same twelve modalities listed in the second and third scale are listed in this scale (acupuncture, biofeedback, chiropractic, herbal medicine, homeopathy, bioelectromagnetic therapy, hypnosis/guided imagery, massage, nutritional supplements, prayer/spiritual healing, meditation, and therapeutic/healing touch). Each modality is designed to be answered with a Likert scale response. The original scale included four possible answers with 1 = Would Not Recommend, 2 = Would Endorse but Not Personally Provide or Refer, 3 = Would Provide Personally, and 4 = Would Refer to a CAM/CAI Practitioner. To improve the accuracy of the continuum of responses, a Revised CAM/CAI Approaches in Your Practice scale was created in which “Would Provide Personally” and “Would Refer to a CAM/CAI Practitioner” were both coded with a value of 3. This change was made because a score of “3” or “4” indicated that they would endorse/use the modality and these responses were seen as overall endorsements of the use of CAM/CAI. Giving these responses the same weight would prevent unnecessary inflation of the response totals. Additionally, some of the CAM/CAI modalities require extensive training and additional licensure, such as chiropractic and acupuncture. A choice not to provide the

modality personally may have been based on practicality rather than a lack of support. The response of “2” was not recoded because the response represented an incongruence between participants’ perceptions and their professional behavior (endorse but not use the modality). The data collected from this scale were used to answer the third research question, *“Is there a relationship between personal use of complementary and alternative interventions and the willingness of counselors-in-training to incorporate complementary and alternative interventions into counseling practice?”* The possible total scores on this scale range from 12 to 36. A total score of 12 would represent an unwillingness to endorse to clients at any level the use of these CAM/CAI modalities at all and a score of 36 would represent a willingness to endorse to clients at any level the use of these CAM/CAI modalities.

The existing literature does not contain any information on reliability for the survey instrument used in this study. Therefore, a Cronbach’s alpha analysis was conducted for each of the scales utilized in the study. According to George and Mallory (2003), Cronbach’s alpha is used to estimate the reliability and internal consistency of a psychometric instrument and is used to measure convergent validity. Garson (2013) explains this coefficient as, “the percent of variance the observed scale would explain in the hypothetical true scale composed of all possible items in the universe (p. 38). In general, the score of this coefficient increases as the intercorrelation between test items increases.

The Cronbach’s alpha coefficient ranges between zero and 1.0, with zero indicating that the true score has not been measured at all and 1.0 indicating that only the true score has been measured and there is no error present (Garson, 2013). Within this range, 0.60 is considered a common cut-off point in exploratory research and 0.70 is more widely accepted as the score required for an instrument to be considered sound (Garson, 2013). George and Mallory (2003)

provide the following rule of thumb for ranges of Cronbach's alpha scores: ">0.9 – Excellent, >0.80 – Good, >0.70 – Acceptable, > 0.60 – Questionable, and >0.50 – Poor, and < 0.50 – Unacceptable" (p. 231).

The Cronbach's alpha results for the scales used in this study are as follows: The *Revised General Attitudes toward Complementary Medicine (CAM) or Complementary and Alternative Interventions (CAI)* scale contained 11 items and the Cronbach's alpha was found to be 0.81. This means that this scale would explain 81 percent of variance in a hypothetical true scale. This value suggests that the items on the scale are a good measure of the latent construct of the "Revised General Attitudes Toward CAM/CAI." The *Revised CAM/CAI Approaches: "Alternative" of Mainstream"?* scale contained 12 items and the Cronbach's alpha was found to be 0.78. This value suggests that the items on the scale are a good measure of the latent construct of "Approaches to CAM/CAI." The *Personal Use of CAM/CAI* scale contained 12 items and the Cronbach's alpha was found to be 0.66. This means that this scale would explain 66 percent of variance in a hypothetical true scale. Although this value is below 0.70, it is still above the generally accepted level of 0.60 for exploratory research (Garson, 2013). Additionally, this scale measures behavior rather than attitude, with "yes/no" responses that might also contribute to the lower Cronbach's alpha value. Taking those conditions into consideration, this value suggests that the items on the scale are an acceptable measure of the latent construct of "Personal Use of CAM/CAI." Finally, the *"Revised CAM/CAI Approaches in Your Practice"* scale contained 12 items and the Cronbach's alpha was found to be 0.89. This means that this scale would explain 89 percent of variance in a hypothetical true scale. This value suggests that the items on the scale are a good measure of the latent construct of "Your Approaches."

Procedures

Each participant completed the *SKACST-CAM/CAI* as part of his or her study participation. The survey was completed in a single session that lasted approximately 15 minutes. All participants were surveyed during a scheduled class meeting and were reminded both verbally and in writing that participation in the study was in no way tied to their course grade and that their instructor would not have access to their survey information. Each survey was coded by course section and given a sequential number. This information was entered into an Excel spread sheet along with the score on each item on the scales in the survey.

Statistical Analysis

The data was analyzed using the statistical software IBM SPSS Statistics 22 (2014) and the assumption of multivariate normality was met. The first research question was analyzed using a one-way ANOVA to compare each of the categorical demographic variables with Scale 1 (general attitudes). The continuous variables were analyzed using Pearson Correlations. The second research question was also analyzed using ANOVA to compare the demographic variables with Scale 3 (Classification as Alternative or Mainstream). Once again, the continuous variables were analyzed using Pearson correlations. Using linear regression, the third research question examined the relationship between personal use of CAM/CAI modalities and willingness to incorporate CAM/CAI approaches into counseling practice.

Ethical Considerations

In order to ensure that proper protocol was followed, permission to conduct this study was obtained by the East Carolina University Institutional Review Board (IRB). Participants were asked to read a letter of consent prior to completing the surveys. This letter explained the purpose of the study, including risks and benefits of participation. The letter also explained that

completion of the surveys indicated consent to analyze and report the data collected. The completed surveys do not contain personal information that could be linked back to participants.

In this study, the participants were not members of a vulnerable population and it is reasonable to assume that they are in as good a state as they would have been had they not participated in the study. The principal investigator was responsible for the anonymity and confidentiality of the data.

Chapter Summary

The research design and method described in this chapter support the purpose of this study, which was to examine the factors that influence counselors'-in-training attitudes towards CAM/CAI, personal use of CAM/CAI modalities, and willingness to incorporate CAM/CAI into their future counseling process. Additionally, the instrumentation, data collection process, and method for data analysis were described.

CHAPTER 4: RESULTS

Introduction

This chapter summarizes the statistical findings of the data collected from the *Survey of Knowledge and Attitudes of Counseling Students Toward CAM/CAI (SKACST-CAM/CAI)* discussed in Chapter 3. Descriptive statistics are provided for general attitudes toward CAM/CAI and categorization of CAM/CAI modalities as either “mainstream” or “alternative.” Following the descriptive statistics is a detailed analysis of the data for each research question. The chapter concludes with a summary of the results.

Sample Demographics

The study sample consisted of 93 full-time and part-time counseling students who are enrolled in a CACREP accredited master’s Counselor Education program in the Department of Counselor and Adult Education (COAD), a CACREP (accreditation in progress) master’s in Substance Abuse and Clinical Counseling program, and a Council on Rehabilitation Education accredited master’s in Rehabilitation and Career Counseling within the Department of Addictions and Rehabilitation Studies (DARS) program within the same university in North Carolina (n = 93).

Of the 93 participants completing the survey, 80 were female (87.0%) and 12 were male (13.0%). The majority of the participants identified their race as White/Caucasian (75.0%). An additional 14.1% of the sample (n = 13) identified their race as Black/African American, 8.7% (n = 8) identified their race as Hispanic, and 2.2% of the sample (n = 2) identified as Multiracial. The ages of the participants ranged from 22 to 59 years old. A majority of the sample fell into the age group of 22 to 29 years old (n = 68, 74.0%). The next highest group was 30 to 39 years old (n =

15, 16.0%) and the smallest age group was 40 to 49 years old (n = 9, 10.0%). The sample was almost evenly divided between the Department of Counseling and Adult Education (n = 52, 56.5%) and the Department of Addictions and Rehabilitation Studies (n = 40, 43.5%). Regarding credit hours completed, the majority of the participants (n=44, 48%) indicated they have completed between 9 and 30 credit hours. Fourteen participants (15%) indicated they have completed between 31 and 50 credit hours and thirty-four participants (37.0%) indicated they have completed between 51 and 60 credit hours. Only six participants identified with having a disability (6.5%). All the demographic data can be found in Table 1.

Table 1

Sample Demographic Data

Demographic Variable	n	Percent
Gender		
Male	12	13.0
Female	80	87.0
Race		
White/Caucasian	69	75.0
Black/African American	13	14.1
Hispanic	8	8.7
Multiracial	2	2.2
*Age		
22-29	68	74.0
30-39	15	16.0
40-59	9	10.0
Department		
COAD	52	56.5
DARS	40	43.5
*Credit Hours Completed		
9-30 hours	44	48.0
31-50 hours	14	15.0
51-60 hours	34	37.0
Disability Status		
Yes	6	6.5
No	86	93.5

Note: n = 93

* Both age and credit hours are continuous variables but were grouped for clearer visual reference.

Data Analysis for Research Questions

This section includes the analysis of data for three research questions. Tables and a summary are provided to assist in summarizing the results.

Data Analysis for Research Question 1

Research Question 1: What is the relationship between the demographic variables (age, gender, program, ethnicity, disability status, completed credit hours) and general attitudes towards CAM/CAI (scale one) on the Revised *Survey of Knowledge and Attitudes of Counseling Students Toward CAM/CAI*?

Descriptive statistics were calculated in SPSS Version 22.0 to compare the range, mean, and standard deviation to the responses on scale one of the survey described above. Table 2 shows the results in descending order from highest to lowest mean.

Table 2

Descriptive Statistics for General Attitudes Toward CAM/CAI

General Attitude Question	Range	Mean	SD
CAM/CAI includes ideas and methods that can benefit counseling (2)	5.00	4.87	1.06
Clinical care should integrate conventional and CAM/CAI practices (1)	6.00	4.80	1.00
Knowledge about CAM/CAI is important to me as a student/future practicing counselor (11)	5.00	4.78	1.11
Health professionals should be able to advise their patients about commonly used CAM/CAI methods (9)	5.00	4.72	1.01
A number of CAM/CAI practices hold promise for the treatment of mental health issues (3)	3.00	4.56	0.96
I hope to have some CAM/CAI practices available to patients in my practice or professional network (8)	6.00	4.41	1.23
CAM/CAI practices should be included in my school's curriculum (10)	6.00	4.35	1.17
While a few CAM/CAI approaches may have limited health benefits, they have no true impact on treatment (6)	6.00	4.17	1.06
The results of CAM/CAI are in most cases due to a placebo effect (4)	6.00	3.86	0.96
CAM/CAI therapies not tested in a scientific manner should be discouraged (5)	6.00	1.10	3.36
CAM/CAI is a threat to public health (7)	5.00	1.15	2.12

The original rating scale for this section was 1 to 6, but for ease of interpretation, the scale was reversed so that the higher scores reflect positive responses. The results of this analysis can be viewed as two separate groups due to the method in which the data was coded. The first group consists of questions 1, 2, 3, 8, 9, 10, and 11 with means that range from 4.35 to 4.87. The second group of questions (4, 5, 6, and 7) were recoded prior to analysis to avoid negative

responses appearing to have high means. The means for these questions ranged from 2.12 to 4.17.

A series of one-way between subjects ANOVAs was conducted to compare the effects of the independent variables of department, gender, disability, and ethnicity on general attitudes towards CAM/CAI (Scale 1). Additionally, a Levene test was also conducted on each comparison to assess the equality of variances.

In the comparison between departments, the mean for DARS was 4.26 with a standard deviation of 0.79 and the mean for COAD was 4.12 and a standard deviation of 0.49. A Levene test for homogeneity of variance was found to be significant for departments, Levene $F(1, 91) = 4.62, p = .03$. To address this issue, a correction was run using a Brown-Forsythe test and the ANOVA was found to be robust, Brown-Forsythe $F(1, 91) = 0.99, p = .32$. There was not a significant effect of department on general attitudes toward CAM/CAI for two conditions, $F(1, 91) = 1.12, p = .29$. Therefore, there were not statistical or practical differences between the COAD and DARS on the *Revised General Attitudes Toward Complementary and Alternative Medicine (CAM) or Complementary and Alternative Interventions (CAI)* scale.

For the variable of gender, the mean for males was 4.17 with a standard deviation of 0.48 and the mean for females was 4.18 with a standard deviation of 0.66. The test for homogeneity of variance was not significant for gender, Levene $F(1, 91) = 1.56, p > .05$, indicating that this assumption underlying the application of ANOVA was met. There was not a statistical effect of gender on general attitudes for the two conditions, $F(1, 91) = .004, p = 0.095$. Therefore, there were not statistical or practical differences between males and females on the CAM/CAI Revised General Attitudes scale.

In the comparison between disability statuses, the mean for individuals not identifying as having a disability was 4.17 with a standard deviation of 0.64 and the mean for individuals identifying as having a disability was 4.37 with a standard deviation of 0.44. The test for homogeneity of variance was not significant for disability status, Levene $F(1, 91) = 0.62, p > .05$, indicating that this assumption underlying the application of ANOVA was met. There was not a significant effect of disability on general attitudes toward CAM/CAI for three conditions, $F(1, 91) = 0.57, p = 0.45$. Therefore, there were not statistical or practical differences between students with disabilities and students without disabilities on the *Revised General Attitudes Toward Complementary and Alternative Medicine (CAM) or Complementary and Alternative Interventions (CAI)* scale.

Finally, in the comparison of ethnicity, the mean for individuals identifying as African American was 3.93 with a standard deviation of 0.77, the mean for individuals identifying as Hispanic was 4.2 with a standard deviation of 0.40, the mean for individuals identifying as Multiracial was 3.80 with a standard deviation of 0.42, and the mean for individuals identifying as White was 4.24 with a standard deviation of 0.63. The test for homogeneity of variance was not significant for ethnicity, Levene $F(1, 91) = 0.98, p > .05$, indicating that this assumption underlying the application of ANOVA was met. There was not a significant effect of ethnicity on general attitudes toward CAM/CAI at the $p < .05$ level for four conditions, $F(3, 89) = 1.11, p = 0.35$. Therefore, there were not statistical or practical differences between African American, Hispanic, Multiracial, and White/Non-Hispanic students on the *Revised General Attitudes Toward Complementary and Alternative Medicine (CAM) or Complementary and Alternative Interventions (CAI)* scale.

Both age and total credit hours are continuous variables; therefore, a Pearson product-moment correlation coefficient was computed to assess the relationship between these variables and the total item score on the General Attitudes Scale. This analysis found there was not a significant correlation between age and total item score, $r = 0.045$, $n = 92$, $p = 0.67$. Additionally, there was also not a significant correlation between credit hours and total item score, $r = 0.118$, $n = 92$, $p = 0.26$. Therefore, the students' General Attitudes Scale scores were not statistical or practical to their age or number of semester hours completed.

Data Analysis for Research Question 2

Research Question 2: What is the relationship between the demographic variables (age, gender, program, ethnicity, disability status, completed credit hours) and classification of CAM/CAI interventions as alternative or mainstream (scale three) on the *Survey of Knowledge and Attitudes of Counseling Students Toward CAM/CAI?*

Descriptive statistics were calculated in SPSS Version 22.0 to compare the range, mean, and standard deviation to the responses on the scale of the survey described above. Table 3 shows the results for each approach.

Table 3

Descriptive Statistics for CAM/CAI Approaches

CAM/CAI Approach	Range	Mean	SD
Acupuncture	3.0	2.06	0.92
Biofeedback	3.0	2.13	1.04
Chiropractic	3.0	1.30	0.74
Herbal medicine	3.0	2.16	0.91
Homeopathy	3.0	2.90	0.97
Bioelectromagnetic therapy	3.0	2.80	1.02
Hypnosis/guided imagery	3.0	2.28	0.86
Massage	3.0	1.37	0.77
Nutritional supplements	3.0	1.45	0.78
Prayer/spiritual healing	2.0	1.49	0.72
Meditation	3.0	1.66	0.87
Therapeutic/healing touch	3.0	2.46	0.95

On this scale, the lower scores indicate the modality is viewed as mainstream and the higher scores indicate the modality is viewed as alternative. The response, “unfamiliar with this

modality” was coded as “4.” This value was chosen to indicate that this response represents an attitude that is extremely alternative.

A series of one-way between-subjects ANOVAs were conducted to compare the effects of the independent variables of department, gender, disability, and ethnicity on CAM/CAI approaches (Scale 2).

In the comparison between departments, the mean for DARS was 1.96 with a standard deviation of 0.37 and the mean for COAD was 2.04 with a standard deviation of 0.55. The test for homogeneity of variance was not significant for department, Levene $F(1, 91) = 1.58, p > 0.05$, indicating that this assumption underlying the application of ANOVA was met. There was not a significant effect of department on view of CAM/CAI approaches for three conditions, $F(1, 91) = 0.51, p = 0.48$. Therefore, there were not statistical or practical differences between the COAD and DARS on the *Revised CAM/CAI Approaches: Alternative or Mainstream scale*.

The comparison between genders showed the mean for males was 1.95 with a standard deviation of 0.62 and the mean for females was 2.01 with a standard deviation of 0.46. The test for homogeneity of variance was not significant for gender, Levene $F(1, 91) = 3.44, p > 0.05$, indicating that this assumption underlying the application of ANOVA was met. There was not a significant effect of gender on view of CAM/CAI approaches for three conditions, Levene $F(1, 91) = 0.17, p = 0.68$. Therefore, there were not statistical or practical differences between the females and males on the *Revised CAM/CAI Approaches: Alternative or Mainstream scale*.

In the comparison between disability statuses, the mean for individuals not identifying as having a disability was 2.02 with a standard deviation of 0.49 and the mean for individuals identifying as having a disability was 1.72 with a standard deviation of 0.16. The test for homogeneity of variance was not significant for disability status, Levene $F(1, 91) = 2.05, p >$

0.05, indicating that this assumption underlying the application of ANOVA was met. There was not a significant effect of disability on view of CAM/CAI at the for three conditions, $F(1, 91) = 2.27, p = 0.14$. Therefore, there were not statistical or practical differences between the students with disabilities and students who did not have disabilities on the *Revised CAM/CAI Approaches: Alternative or Mainstream* scale.

Finally, in the comparison of ethnicity, the mean for individuals identifying as African American was 2.08 with a standard deviation of 0.68, the mean for individuals identifying as Hispanic was 2.17 with a standard deviation of 0.30, the mean for individuals identifying as Multiracial was 1.79 with a standard deviation of 0.30, and the mean for individuals identifying as White was 1.98 with a standard deviation of 0.46. The test for homogeneity of variance was not significant for ethnicity, Levene $F(1, 91) = 0.66, p > 0.05$, indicating that this assumption underlying the application of ANOVA was met. There was not a significant effect of ethnicity on view of CAM/CAI approaches at the $p < 0.05$ level for three conditions, $F(3, 88) = 0.67, p = 0.58$. Therefore, there were not statistical or practical differences between African American, Hispanic, White/Non-Hispanic, and Multiracial students on the *Revised CAM/CAI Approaches: Alternative or Mainstream* scale.

Both age and total credit hours are continuous variables, therefore a Pearson product-moment correlation coefficient was computed to assess the relationship between these variables and the total item score on the Approaches scale. This analysis found there was not a significant correlation between age and total item score, $r = -0.18, n = 92, p = 0.09$. Additionally, there was also not a significant correlation between credit hours and total item score, $r = 0.00, n = 92, p = 0.94$.

Data Analysis for Research Question 3

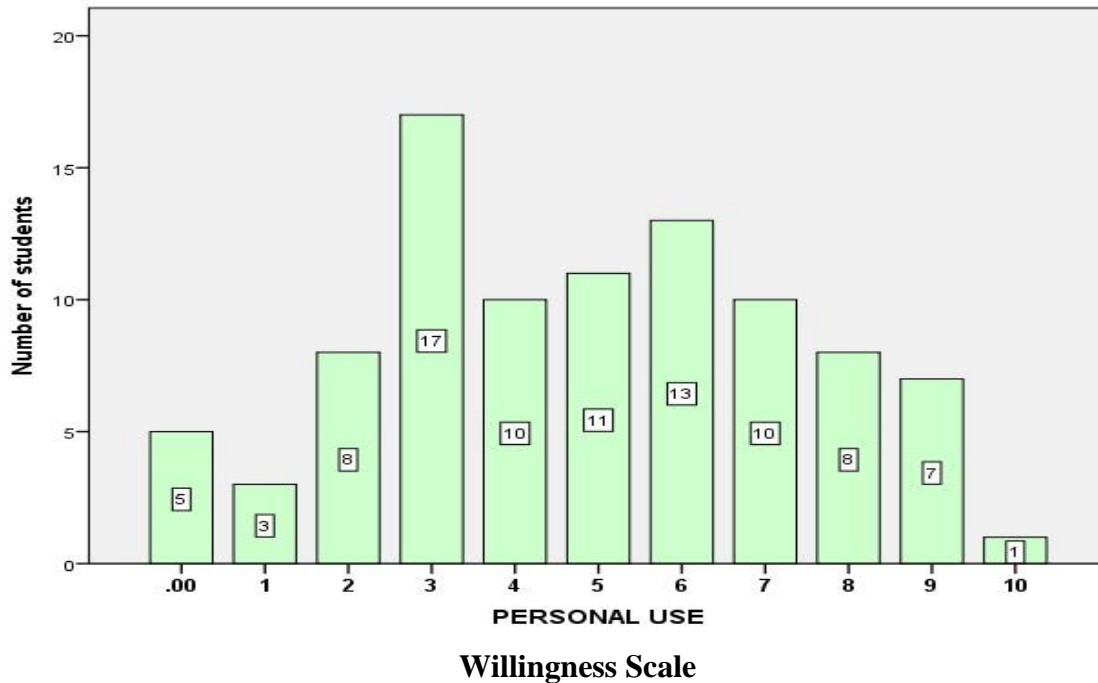
Research Question 3: Is there a relationship between personal use of CAM/CAI practice and willingness to incorporate CAM/CAI approaches into counseling practice?

Personal Use Scale

There are twelve modalities on the personal use scale. A score of zero indicates none of the modalities were chosen and a score of twelve indicates that all of the modalities were chosen. Although an analysis of the data for personal use shows that the scores on this scale ranged from 0 to 10 indicating the number of CAM/CAI modalities personally used by the participants in the study, most of the scores were at the high end of the scale. Less than 20% of the participants indicated they have personally used two or fewer CAM/CAI modalities, while an overwhelming majority of the participants (80%) indicated they have used three or more CAM/CAI modalities. Finally, approximately 42% of participant indicated they have personally used at least five or more modalities. These participants were engaged in active learning by trying different CAM/CAI modalities. These results might suggest an overall positive view of CAM/CAI modalities. The bar graph below provides a visual representation of the data.

Figure 2

Personal Use

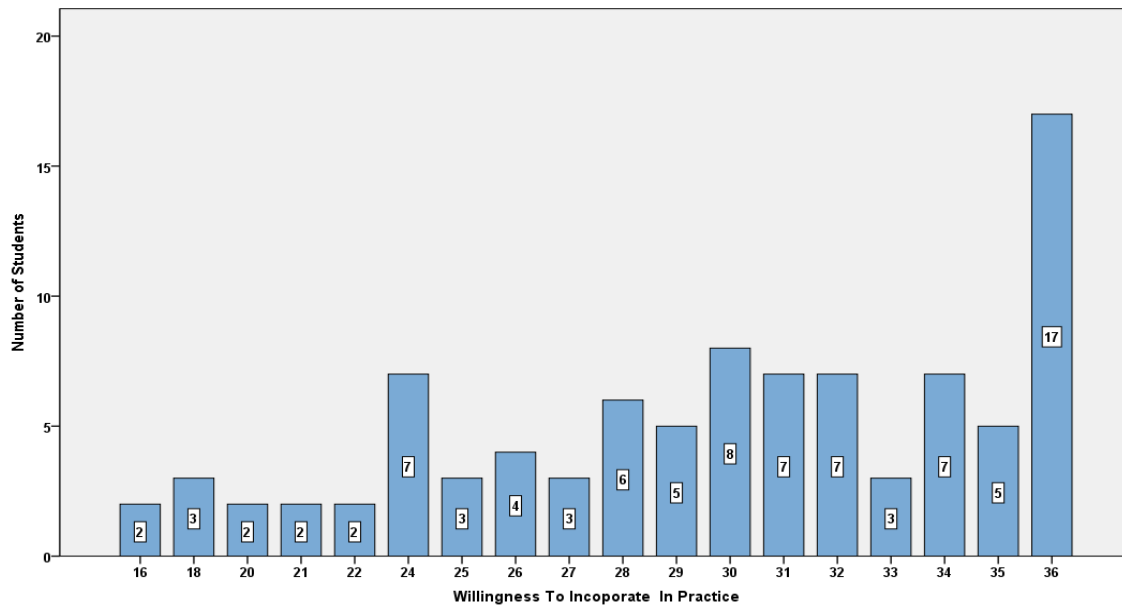


An analysis of the twelve items on the willingness to incorporate CAM/CAI into practice scale shows that the scores on this scale ranged from 12 to 36, indicating the number of CAM/CAI modalities the participants in the study would endorse for use by clients. A score of 12 would represent an unwillingness to recommend any of the CAM/CAI modalities. Only two participants scored 16, which indicates a reluctance to recommend, refer, or provide CAM/CAI. A score of 36 is the highest possible score on the scale and shows a willingness to recommend, refer, or provide all of the CAM/CAI modalities listed. Seventeen participants scored a 36 on this scale, which means they would recommend all twelve modalities to clients for inclusion in clinical practice. Only two participants had a score of 16 on this scale, indicating they were less likely to recommend more than two of the modalities to clients. As the bars on the graph move from left to right, the number of participants per bar increases, indicating a higher level of willingness to recommend CAM/CAI in clinical practice. These results indicate an overall willingness to incorporate CAM/CAI modalities into the counseling process. These results also suggest that participants view the use of CAM/CAI as an overall philosophy rather than

considering each modality as a separate entity. The bar graph below provides a visual representation of the data.

Figure 3

Willingness



A simple linear regression was conducted to determine how well personal use of CAM/CAI practices predicts willingness to incorporate CAM/CAI approaches into counseling practice. The results of this analysis indicate that personal use is a good predictor of willingness to incorporate CAM/CAI into counseling practice, $F(1, 91) = 8.81, p = .004$. Additionally, R squared indicates that approximately 8.8% of the variation in total willingness scores was predicted by total personal use scores. The table below provides detailed results of this analysis.

Table 4

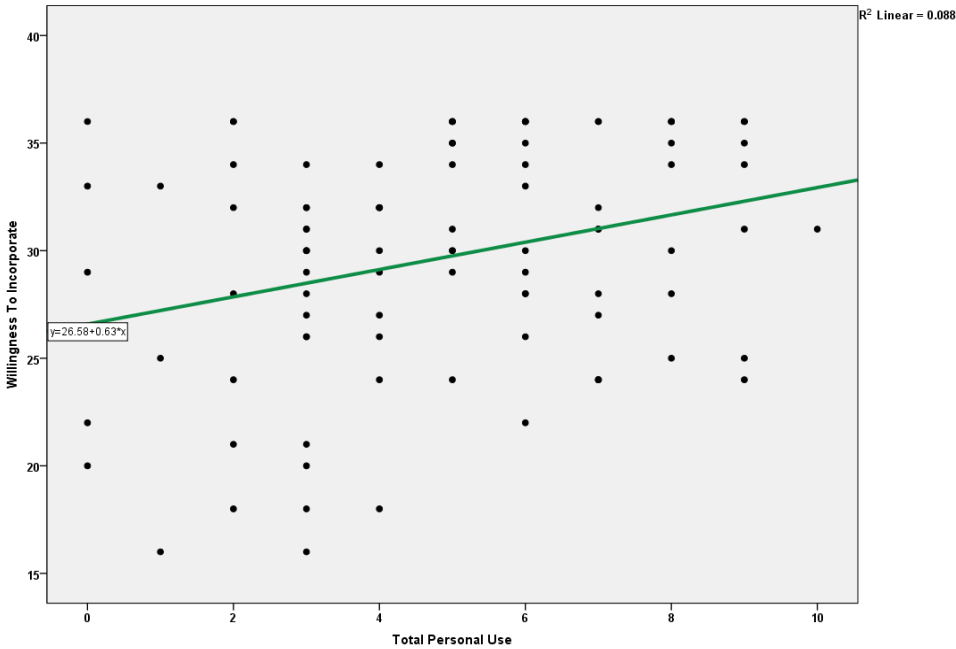
Linear Regression Results for Relationship of Personal Use and Willingness to Incorporate Approaches into Practice

	B	S.E.	β	t	Sig.
(Constant)	26.58	1.17			0.00
Use Total	0.64	0.21	0.28	2.97	0.004

The scatterplot below shows the linear relationship, including the linear equation between personal use of CAM/CAI modalities and willingness to incorporate CAM/CAI into professional practice.

Figure 4

Scatterplot of Personal Use of CAM/CAI against Willingness to Incorporate into Practice



Chapter Summary

This chapter provided a description of the sample demographics and descriptive data and a review of the statistical analyses used in the study. A majority of the participants were females between the ages of 22 and 29 who identified as being White/Not Hispanic. The distribution between academic departments was fairly even and most participants indicated they had completed between 9 and 30 graduate credit semester hours. Analysis of the demographic variables using one-way ANOVAs and Pearson product-moment correlation coefficients did not find any significance in general attitudes toward CAM/CAI or in how CAM/CAI modalities were viewed (mainstream versus alternative). However, a simple linear regression did find significance in the relationship between personal use of CAM/CAI and willingness to incorporate CAM/CAI modalities into counseling practice. The following chapter will provide a summary of the study, interpretation of the results, limitations of the study, and implications for further research

CHAPTER 5: DISCUSSION

Introduction

This chapter begins with a summary of the purpose of this study along with the variables measured, study sample, methods, and data collection. Next, study results are discussed including demographic variables, descriptive statistics, as well as the results from each of the research hypotheses and questions. Limitations of the research are then presented, followed by a discussion of implications for practitioners and areas for future research. The chapter concludes with a final summary of the study.

Summary of the Study

This exploratory descriptive study was designed to examine attitudes of counselors-in-training toward complementary and alternative medicine (CAM) and complementary and alternative interventions (CAI), their personal experience with CAM/CAI modalities, and their willingness to incorporate CAM/CAI into their future counseling practice. Specifically, the study used a series of one-way ANOVAs to compare each of the categorical demographic variables with Scale 1 (*Revised General Attitudes Scale*) and Scale 3 (*Revised Classification as Mainstream or Alternative*). Pearson product-moment correlations were used to compare the continuous variables with the same scales. A linear regression was completed to examine the relationship between personal use of CAM/CAI modalities and the willingness of counselors-in-training to incorporate CAM/CAI approaches into their future counseling practice.

Interpretation of Results

This section contains a detailed discussion of the results of the statistical analyses reported in Chapter 4. This section begins with a discussion of demographic and descriptive

statistics, followed by an examination of the findings from the statistical analyses, and results for each of the three research questions. Finally, the chapter concludes with implications, limitations, future directions, and a final summary.

Demographic Variables

Through analysis, the demographic variables were a fairly homogeneous sample. The 93 participants were almost evenly divided between the two academic departments (DARS: n = 40: 43.5%, COAD: n = 52: 56.5%). A majority of the participants were women (n = 80; 87.0%) and identified as White/Not Hispanic (n=69; 75%). The next largest group was African American (n = 13; 14.1%) followed by Hispanic (n = 8; 8.7%) and Multiracial (n = 2: 2.2%). Six individuals identified as having a disability (6.5%). Most of the participants were age 22 to 29 (n = 68; 74%) and had completed between 9 and 30 hours of graduate credit (n = 44: 48%).

Results of Research Questions

Research Question 1: What is the relationship between the demographic variables (age, gender, program, ethnicity, disability status, completed credit hours) and general attitudes towards CAM/CAI (scale one) on the *General Attitudes – Revised*.

A series of one-way ANOVAs was conducted to examine the differences between groups on each demographic variable of gender, program, ethnicity, and disability status. Pearson product-moment correlations were conducted to examine the continuous variables and the relationship of attitudes about CAM/CAI with the students' age and number of credit hours completed. When these variables were examined to determine if the groups were from the same population, in all but one of the variables, there was homogeneity of variance between the groups. The ANOVA results revealed there were no significant differences in general attitudes towards CAM/CAI between any of the six demographic variables. Likewise, there was not a

significant relationship between attitudes toward CAM/CAI and either age or the number of credit hours completed. Therefore, it is reasonable for all participants to be seen as part of the same population.

Because there were not any significant differences in the demographics, these findings might suggest that the differences may be the result of other variables not examined in this study. One area to explore further is the construct of the academic programs in which the participants are enrolled. Both programs have gone through the CACREP accreditation process and are under the same rubric for course and content requirements. Additional research might focus on whether counseling students who have been trained in a similar fashion share similar attitudes and views towards CAM/CAI despite their individual demographic differences. A third area of exploration could be whether specific personality traits or psychological characteristics of counselors-in-training influence the desire to learn about or use CAM/CAI modalities.

Research Question 2: What is the relationship between the demographic variables (age, gender, program, ethnicity, disability status, completed credit hours) and classification of CAM/CAI modalities as alternative or mainstream (scale three) on the *Revised Survey of Knowledge and Attitudes of Counseling Students Toward CAM/CAI*?

A series of one-way ANOVAs was conducted to examine the differences in the categorical variables and Pearson product-moment correlations to examine the continuous variables to examine the difference on CAM/CAI modalities (“mainstream” or “alternative”) by age, by gender, by program, by ethnicity, by disability status, or by number of credit hours completed. These variables were examined to determine if the groups were from the same population and if there was homogeneity of variance between all the groups. The ANOVA results revealed there were no significant differences in classification (alternative or mainstream)

of CAM/CAI modalities between any of the six demographic variables. The ANOVA results on the analysis revealed there was no significant difference in how any of the CAM/CAI modalities were classified. Again, this supports the idea that the participants can be viewed as one population and share similar attitudes toward classification of CAM/CAI modalities.

Research Question 3: Is there a relationship between personal use of CAM/CAI practices and willingness to incorporate CAM/CAI approaches into counseling practice?

Participants' personal experience with CAM/CAI modalities was measured using scale four (Personal Use of CAM/CAI modalities). Participants' willingness to incorporate CAM/CAI modalities into future clinical practice was measured using scale five (CAM/CAI Approaches in Your Practice) on the *Revised Survey of Knowledge and Attitudes of Counseling Students Toward CAM/CAI*. A linear regression was conducted to examine the relationship between personal use of CAM/CAI modalities and willingness to incorporate CAM/CAI approaches into counseling practice. The results of this analysis indicate that personal use is a significant predictor of a counseling student's willingness to incorporate CAM/CAI into his or her clinical practice.

Summary of Research Questions and Results of Previous Research

Both Research Question 1 and Research Question 2 examined differences between groups on different demographic variables regarding general attitudes towards CAM/CAI modalities. There were no differences between the groups on attitudes toward CAM/CAI, and the participants' responses reflected a positive view of CAM/CAI.

Research Question 2 examined the differences between groups on different demographic variables and perceptions of whether CAM/CAI modalities were classified as "mainstream" or "alternative." The results on the analysis of Question 2 did not reveal any significant difference

in how CAM/CAI modalities were classified between any of the groups. Although there were no differences in the groups, participants had a similar view of how the modalities should be classified.

In the field of health care, there are several studies that support the finding that CAM/CAI approaches are increasing in popularity and are viewed favorably by health care professionals in training. Additionally, there have been some studies looking at mental health practitioners in general and their perceptions and attitudes toward CAM/CAI. However, there are no current studies specifically addressing attitudes and personal experiences of counselors-in-training.

A study conducted by Evans et al. (2002), mentioned in chapter two, used a sample of 151 mental health practitioners who were randomly selected from the ACA's membership list to examine practitioners' perceptions of clients' attitudes toward non-traditional counseling practices, including CAM/CAI modalities. The study found no difference in gender or ethnicity. This study also examined respondents' attitudes toward non-traditional therapies, including CAM/CAI modalities, and found no significant difference between gender groups. The study did find that ethnic minority groups were significantly more likely to have favorable attitudes.

Likewise, Caldwell, Winek, and Becvar (2006) surveyed 958 members of the American Association of Marriage and Family Therapists (AAMFT) and explored what attitudes could be attributed to marriage and family therapists who recommend CAM/CAI, refer to CAM/CAI providers, and receive referrals from CAM/CAI providers. Although Caldwell and her colleagues examined the factor structure of therapists' perceptions about CAM/CAI modalities, they did not compare differences between groups on demographic variables. The participants in the Caldwell study showed an overall favorable attitude towards CAM/CAI modalities and a

willingness to recommend CAM/CAI modalities to clients. Additionally, most study participants indicated they have personally tried numerous CAM/CAI practices.

There have been several studies conducted in England, Norway, and the United States to explore the general populations' perceptions and use of CAM/CAI modalities; the results of these studies also support the overall results of Research Question 1 and Research Question 2 in the current study. Kristofferson et al. (2012) found a significant difference between men and women in the general population in their use of CAM. The study proposed that these differences could be attributed to several socioeconomic variables (age, education, and household income) and speculated that women's health care needs are often neglected in public health care and this could contribute to women using CAM modalities at a higher rate than men.

A study by McKenzie et al. (2003) oversampled ethnic minorities in order to examine the socioeconomic characteristics of CAM utilization. The results showed CAM use to be equally prevalent among White/non-Hispanic and other ethnic minority groups. Further analysis showed that predictors of CAM use are female gender, lack of health insurance, and completion of a high school education or higher. These results support the findings in the Kristofferson study mentioned above that suggests that future studies examining the role of gender should include analysis for possible confounding variables.

While results of this current study did not find a difference in attitudes toward CAM/CAI based upon ethnicity, these results need to be considered with caution because there were relatively small numbers of each minority group represented in this sample. Future studies should use quota sampling or non-proportional quota sampling with the goal of increasing the diversity of the sample. Another approach might be to look at CAM/CAI modalities through a cultural practices lens and to examine the differences among the groups.

Another variable examined in this current study is disability status. A study conducted in England by Ong et al. (2002) examined the link between health status and use of CAM. The results showed that 60% of the 14,000 participants surveyed who reported using CAM also reported a chronic health condition or a disability. The study also revealed that CAM users reported overall poorer health than non-CAM users, even if they did not specifically identify with a disability or chronic health condition, particularly in the dimension of physical pain.

Although there was not any significant difference between groups in the area of disability status in this study, participants with a disability had a lower mean score (1.72) than those participants without disabilities (2.02). This result suggests that people identifying as having a disability also view more CAM/CAI modalities as mainstream, which is supported by the results of the study conducted by Ong et al. (2002) mentioned previously. Future research might be expanded to include chronic health conditions along with disability status in order to broaden the category and explore the idea that CAM/CAI is often sought out by people who are frustrated by the limitations of traditional health care approaches. According to Thorne et al. (2002), “when there is no cure available, people are challenged with the on-going process of self-care management so that they may live their lives as well as possible” (p. 672).

The third research question in this study examined the relationship between personal use of CAM/CAI practices and willingness to incorporate CAM/CAI approaches into counseling practice. The results of this analysis showed that personal use is a significant predictor of willingness to incorporate CAM/CAI approaches into counseling practice. Previous research conducted by Schure et al. (2008) examined the use of mindfulness practice with counseling graduate students. Results of the study found that exposure to this modality increased knowledge and skills associated with the practice. Additionally, findings revealed how personal use of CT

by counselors can be a main source of knowledge, influencing future professional clinical practice.

Additionally, studies in other professions have found a relationship between even minimal knowledge about a CAM/CAI practice and positive attitudes toward CAM/CAI (Rosenbaum, Nisly, Ferguson, Kligman, 2002). An implication for counselor education is that even basic knowledge of one or more CAM/CAI practices may lead faculty and students to seek evidence-based practices in this area. Future counselor education research should explore whether or not experience and exposure to CAM/CAI modalities has the ability to change attitudes. Also, it would be helpful for educators to explore how much exposure or experience is necessary to have a positive impact on attitudes in order to develop appropriate curriculum and teaching methods. Similarly, research should continue to focus on whether or not experience or exposure in counselor training affects how counselors relate to clients who are interested in or using CAM/CAI in the counseling process or as part of an integrative treatment plan.

Current counseling students are the future of the profession and will soon be in the position to influence the direction of future initiatives in the field of counseling. Currently, very little is known about the ways in which they view CAM/CAI and how they might implement these modalities in future clinical practice. While this research question looked specifically at personal use of CAM/CAI and found it is clear that there is a relationship between their personal experiences with CAM/CAI and their willingness to use it in future clinical practice, the survey also collected data on general attitudes towards CAM/CAI and also perceived barriers to using CAM/CAI in clinical practice. Additional studies might include examining the relation of these variables to willingness to use CAM/CAI in clinical practice, to see if any relationships are present.

Study Limitations

The limitations of this study fall into three categories: research design, external validity, and instrumentation. These limitations and the influences on the interpretation of the results will be explained in this section.

Research Design

This study utilized an exploratory descriptive research design and both relational and causal questions. The design in this study is considered to be non-experimental, which is the most common form of research design, but also has the weakest internal validity due to lack of a control group and data collection based on a single observation. Despite these stated limitations, this study was an efficient and cost-effective way to begin studying an unexplored area in the field of counseling. According to Campbell and Stanley (1966), correlation studies are useful in investigating relationships rather than establishing causality. Before developing more elaborate research studies, we need to develop a baseline of counseling students' relationship toward CAM/CAI. This study revealed overall positive attitudes and interest in this topic, opening the door for more in-depth studies in this area.

External Validity

External validity is the degree to which the conclusion of this study can be generalized to other subjects and situations (Trochim, 2006). The sample for this study was collected using nonrandomized convenience sampling. Although the participation rate from each department was close to 95%, the total sample size for this study was relatively small (n=93). Even though homogeneity of variance was observed for each variable, some of the groups examined had low numbers of participants, which could affect the accuracy of the results. Additionally, all participants were from the same university in eastern North Carolina. Therefore, caution should

be used in generalizing these results to other counselors-in-training. Future studies should incorporate random sampling in order to strengthen external validity and improve generalizability.

Instrumentation

In addition to sparse research focusing on the use of CAM/CAI in the counseling profession, research also found no evidence of surveys designed for use specifically with counselors or counselors-in-training. The survey instrument used to collect the data in this study, the *Survey of Knowledge and Attitudes of Counseling Students Toward CAM/CAI (SKACST)*, was adapted from another survey originally designed for medical students. Previous studies using the *SKACST* have not examined its psychometric characteristics and there were no published validity or reliability statistics available for this instrument.

The data used in this study were collected through use of a self-report style survey. There is a possibility that respondents did not answer honestly and were influenced by wanting to report socially and professionally appropriate responses rather than providing answers that actually reflected their personal experiences and beliefs. Also, even though students were reminded both verbally and in writing that participation in this study was not part of their classwork, the survey was administered during a class meeting and participants may not have felt comfortable declining to participate, or felt compelled to answer the questions in a way that would be viewed favorably by the instructor. Even with these forces present, 100% of the students in each class volunteered to complete the surveys and many students even wrote anecdotal comments, indicating they were engaged in the process beyond the minimum requirement of completing the scales. Additionally, students appreciated an opportunity to

contribute information to the program and viewed this as an opportunity to express their views beyond the classroom setting.

The Cronbach's alpha for each scale used in this study was between 0.66 and 0.89; future studies should focus on refining this instrument and evaluating the psychometric characteristics to ensure that the scales are valid and reliable in examining attitudes and knowledge about CAM/CAI. While this study has demonstrated the internal reliability of four scales from the *SKACST (Revised General Attitudes Toward Complementary and Alternative Medicine (CAM) or Complementary Interventions (CAI); Revised CAM/CAI Approaches: Alternative or Mainstream; Personal Use; and Revised CAM/CAI Approaches to Your Practice)*, the instrument could be refined further by examining its content and construct validity.

Implications of the Study

This study examined an emerging area of counseling: CAM/CAI and attitudes and personal use of counselors-in-training. Overall, the students who participated in the study had the same attitudes toward CAM/CAI and viewed CAM/CAI modalities similarly, regardless of their demographic groups (department, gender, ethnicity, disability status, age, and credit hours completed). In addition, there was a relationship between students' personal experience with CAM/CAI modalities and their willingness to incorporate CAM/CAI into future clinical practice. Implications of this study related to counselor education, clinical practice, and future research within the counseling profession is addressed in the following section.

Implications for the Counseling Profession

Medical professionals and allied health professionals, as well as other mental health professionals, have begun to view CAM/CAI as essential components in the process of clinical training, in the development of professional characteristics, and in treatment of clients and

patients. Despite the growing acceptance of CAM/CAI in other health and mental health care professions, the field of counseling is just beginning to consider how CAM/CAI are taught and viewed in professional practice. In the results of this study, most participants agreed with the question, “CAM/CAI practices should be included in my school’s curriculum,” which indicates an interest and an overall positive attitude towards inclusion. Counselors-in-training included in this study reported positive attitudes and a significant amount of personal experience with CAM/CAI modalities, particularly the mind-body practices. Counselors-in-training look similar to other mental health professions based on the results of similar studies.

The field of counseling is beginning to show positive attitudes and a strong belief that CAM/CAI should be integrated into education and training. This evolution could be strengthened by increasing research and publications and adding CAM/CAI and integrative mental health care to the agendas of national professional organizations and accreditation standards. This approach will be challenging because CAM/CAI modalities initially do not appear to be compatible with traditional research methods. Many published studies include only a few participants and are not conclusive but focus more on self-report, and raise the possibility of the placebo effect. Additionally, research on CAM/CAI has mainly been conducted in the medical field, which has been supported through grants from NIH and NCAM. In order to begin this process, counseling could benefit from establishing a focus group or national campaign that focuses on integrative care and CAM/CAI. By highlighting counseling’s philosophical foundation in wellness and comparing this perspective to the integrative mental health care model, the counseling profession can bring important attention to how uniquely suited the field of counseling is to adapt the integrative care model as a best practice (Berger, 2011).

Implications for Counselor Education

The process of counselor education and training focuses on examining the backgrounds, biases, and worldviews of counselors-in-training to help them develop empathy and acceptance for all clients (Rothaupt & Morgan, 2007). The counseling profession would benefit from an increased awareness of the various treatment modalities clients may be using in order to provide effective and integrated treatment as modeled in other health professions.

For example, integrative care and CAM/CAI are becoming more prevalent in health care settings throughout the country. This phenomenon can be seen through the work being done at Duke University's Integrative Medicine program and the University of Arizona's Center for Integrative Medicine, along with many other major medical training programs that are both training medical professionals and providing integrative care for patients.

An increasingly important emphasis in the counseling profession is focusing on helping counselors-in-training develop multicultural competency (CACREP, 2009). As the United States becomes more culturally diverse, there is an increasingly important need for future counselors to have some knowledge of CAM/CAI modalities and their efficacy and safety so that they may better address the treatment needs of the clients they serve. In the increasingly diverse practice of counseling, providing counselors-in-training with cultural competency skills to communicate effectively with clients about CAM/CAI and to evaluate evidence for various CAM therapies is imperative.

An example of utilizing CAM/CAI to address cultural needs can be seen in the video "Unimagined Bridges," a documentary that explores the use of NADA aural acupuncture for treatment of trauma following the terrorist events of September 11, 2001 and Hurricane Katrina. Francis Wong, a social worker at St. Vincent's Hospital in New York City, explains the

importance of respecting cultural needs of groups affected by these events. She states, “We were hoping at the St. Vincent’s clinic that we could combine eastern practices with western holistic healing. People in the Chinese community feel like they know acupuncture, which has been a part of our culture for 5,000 years. There are a whole bunch of people who have not had acupuncture but are open to the idea of having it because it is familiar” (Cooley, 2013). The description of acupuncture’s significance in the Chinese community highlights the relationship between CAM/CAI and the importance of multicultural sensitivity when offering clients options for treatment. Just as acupuncture connects to the Chinese culture, counselors should be aware of how other CAM/CAI modalities have links to different cultures.

As counselors-in-training become more knowledgeable and skilled at evaluating CAM/CAI modalities, the likelihood of their incorporating CAM/CAI modalities or referring patients to CAM/CAI providers is likely to increase. Additional studies will be needed to evaluate the most effective teaching methods to introduce and educate students on integrative care and CAM/CAI. An example would be to track students’ attitudes by conducting pre-test and post-test evaluations to measure change. One approach might be to incorporate experiential opportunities so students can observe how modalities are included in treatment and even have an opportunity to try some modalities personally. Another approach might be to include testimonies of individuals who have personal experiences with specific CAM/CAI modalities.

This study found that counselors-in-training had overall positive attitudes toward CAM/CAI and an interest in incorporating these modalities into their future clinical practice. So, a question that emerges from this information is how do we (counseling professionals) build a bridge between where the profession is now and what our stakeholders (students, clients) want? In this process, there needs to be a balance between honoring the beliefs and needs of

stakeholders and also maintaining a standard of care that follows best practice and evidence-based treatment standards.

One approach might be for counselor education programs to establish or enhance training programs that include CAM/CAI. This improvement might begin with an examination of the current curriculum to see where CAM/CAI is already being taught and find effective ways to infuse these ideas into the existing course structure. For example, we could teach students about an integrative care model as a part of a pre-practicum course and help them become comfortable and competent in including questions about CAM/CAI in the assessment and treatment planning process. Also, we could look for ways to include CAM/CAI into a multicultural course to consider various modalities from a cultural perspective. The results of this current research showed that personal experience with CAM/CAI does affect willingness to include CAM/CAI in clinical practice. Thus, experiential learning opportunities could be developed in counseling theories and techniques courses so that students could see the details and possibly experience the benefits of certain interventions.

By familiarizing students with the language of integrative care and teaching them how to incorporate modalities into treatment, the mystique surrounding CAM/CAI can be lessened and it is more likely to be viewed as a legitimate aspect of clinical care. This enhanced training will enable counselors-in-training to be prepared to compete with other providers who already use the integrative care model in their professional standard of care.

Some other important steps in this process also include establishing a national dialogue about the relationship between counseling and CAM/CAI, creating training standards, and developing programs that enable counselors to specialize in integrative care in clinical and health care settings. Currently, there is an opportunity for counselor education to highlight its

foundation on wellness and prevention, and lead this emerging field of mind-body medicine by establishing a framework for working effectively within an integrative care model. Other professions have found it important to establish CAM/CAI competencies, guidelines for ethical conduct, curriculum standards, research agendas, journals, and divisions within their organizations devoted to CAM/CAI and this will need to happen in the counseling field also.

Implications for Future Research

This study examined a wide range of CAM/CAI modalities and did not distinguish between practices more commonly linked to mental health and substance abuse treatment and practices more often related to treatment of medical conditions. That is because the original survey instrument was designed for use with medical students who will be providing physiological assessment and treatment rather than evaluation of mental health concerns. This further emphasizes the need for development of and refinement of survey instruments that examine modalities more closely aligned with the counseling process to support the research needs of the counseling profession.

Rather than focusing on a wide range of modalities, future studies should examine more specific types of CAM/CAI, such as mind-body practices. By asking counselors-in-training about such a wide range of CAM/CAI practices, it is possible that the data collected are not an accurate reflection of CAM/CAI modalities more closely associated with the counseling process. For example, an individual's attitude toward homeopathy may differ significantly from his or her attitude toward prayer/spiritual healing. This study was designed to consider CAM/CAI practices collectively, but future research might benefit from looking more specifically at the mind-body practices with which counselors have more experience and knowledge, and that may have more association with the counseling profession.

Future studies might also consider aligning with categories of CAM/CAI practices provided by NCCAM in order to stay consistent with how these practices are viewed in other professions. This standardization will help create a common structure for all professions to talk and write about these modalities in teaching, clinical practice, and research. Additional research in this area could focus on attitudes towards specific modalities, such as mind-body practices or alternative medical systems, to see if there are differences in how each specific category is viewed by students. The results could better inform curriculum design for teaching about CAM/CAI therapies.

This study used a modified version of a survey originally designed for use with medical students. Some of the questions had to be re-worded to be applicable to the counseling profession and several of the scales needed to be revised to reflect consistent scoring. Future studies would benefit from the continued refinement of a survey instrument that is psychometrically sound and fosters an understanding of how these findings generalize to other groups of counselors, such as counselor educators, independently practicing counselors, and counselors in specialty areas (veterans, vocational rehabilitation). Conducting more research on CAM/CAI will increase the profession's understanding of integrative mental health practice in counseling and assist clinicians, counselor educators, and counselors-in-training in implementing this model into counseling practice.

This study touched on the surface of identifying variables that affect students' willingness to incorporate CAM/CAI into future clinical practice. This study showed that personal use of CAM/CAI is a predictor of willingness, but there is much to be learned about how students develop attitudes, and whether and how these attitudes can be changed. Further exploration of this topic could include a research study using an experimental pre- and post-test design that

includes a treatment group and a control group, and an educational intervention related to the use of a specific CAM/CAI modality. The results of this type of study would help examine the variables (type of CAM/CAI modality, experiential learning environment) that may influence a counselor's-in-training willingness to incorporate CAM/CAI into clinical practice.

Conclusion

The use of CAM/CAI modalities is prevalent and increasing in the general population of the United States (NCCAM, 2014). A variety of CAM/CAI practices are being utilized to assist in the reduction of stress, manage depression and anxiety, and cope with disabilities and chronic health issues. Research has shown that mind-body practices such as breathing exercises, biofeedback, hypnosis, meditation, and prayer are useful in dealing with a variety of mental health and substance abuse issues. Recent data gathered by NCCAM indicate that close to 40% of adults in the United States use some form of CAM/CAI (NCCAM, 2014). In light of this growing interest, medical professionals and many mental health disciplines have begun integrating CAM/CAI into training, professional standards, clinical practice, and research.

Despite the growing acceptance of CAM/CAI in other fields, the counseling profession is just beginning to examine integrative care and CAM/CAI as essential components of clinical practice, and little research has been done to explore how to proceed with this process. The first step taken by the fields of medicine, psychology, and marriage and family therapy was conducting a survey of stakeholder attitudes for evaluating the role of CAM/CAI in the respective profession. The results of this study indicated that counselors-in-training have positive attitudes toward CAM/CAI and the majority of participants believe that CAM/CAI should be integrated into counselor education training. Counselors-in-training were also likely to have

personal experience with CAM/CAI modalities and this experience influenced their willingness to endorse or incorporate CAM/CAI into future counseling practices.

This research suggests that a majority of counselors-in-training have some knowledge of and experience with CAM/CAI modalities and they believe CAM/CAI should be integrated into education and training. This research examined the gap in education and training practices and could help counselor educators find effective ways to integrate CAM/CAI modalities into curriculum and teaching practices. Future research should explore the reasons why counselors-in-training with personal experience with CAM/CAI, and who believe that CAM/CAI should be integrated into clinical practice, may still be reluctant to recommend or endorse effective and appropriate CAM/CAI modalities to clients.

Future research should also consider exploring the content of courses being taught on CAM/CAI in counselor education programs, what practices counselors and counselor educators are using most frequently, and what clients' attitudes and experiences are with CAM/CAI and the counseling process. The counseling profession should also consider the role of integrative care and CAM/CAI in the CACREP standards, establishing national competencies and ethical guidelines for counselor training programs to utilize in this process.

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APPENDIX A: INSTITUTIONAL REVIEW BOARD



EAST CAROLINA UNIVERSITY
University & Medical Center Institutional Review Board Office
4N-70 Brody Medical Sciences Building · Mail Stop 682
600 Moye Boulevard · Greenville, NC 27834

Office **252-744-2914** · Fax **252-744-2284** · www.ecu.edu/irb

Notification of Initial Approval: Expedited

From: Social/Behavioral IRB

To: [Celeste Crawford](#)

CC: [Shari Sias](#)

Date: 4/23/2015

Re: [UMCIRB 15-000489](#)
Attitudes of Counseling Students Toward Complementary and Alternative Interventions

I am pleased to inform you that your Expedited Application was approved. Approval of the study and any consent form(s) is for the period of 4/23/2015 to 4/22/2016. The research study is eligible for review under expedited category #7. The Chairperson (or designee) deemed this study no more than minimal risk.

Changes to this approved research may not be initiated without UMCIRB review except when necessary to eliminate an apparent immediate hazard to the participant. All unanticipated problems involving risks to participants and others must be promptly reported to the UMCIRB. The investigator must submit a continuing review/closure application to the UMCIRB prior to the date of study expiration. The Investigator must adhere to all reporting requirements for this study.

Approved consent documents with the IRB approval date stamped on the document should be used to consent participants (consent documents with the IRB approval date stamp are found under the Documents tab in the study workspace).

The approval includes the following items:

Name	Description
CAM/CAI Survey	Surveys and Questionnaires
Dissertation Proposal_Crawford	Study Protocol or Grant Application
Survey Letter for IRB.docx	Consent Forms

The Chairperson (or designee) does not have a potential for conflict of interest on this study.

IRB00000705 East Carolina U IRB #1 (Biomedical) IORG0000418
IRB00003781 East Carolina U IRB #2 (Behavioral/SS) IORG0000418

APPENDIX B: COVER LETTER AND GENERAL CONSENT

Dear Participant,

My name is Celeste Crawford and I am a doctoral student at East Carolina University in the Department of Addictions & Rehabilitation Studies. I am asking you to take part in my research study entitled, “Complementary and Alternative Interventions: Attitudes and Use of Counselors-in-Training in Counselor Education Programs.”

The purpose of this research is to examine the attitudes of counselors-in-training towards complementary and alternative medicine (CAM) and complementary and alternative interventions (CAI), counselors-in-training personal experience with CAM/CAI, and their willingness to incorporate alternative approaches in counseling practice. By doing this research, I hope to learn more about how CAM/CAI is viewed by counselors-in-training. Your participation is completely voluntary.

You are being invited to take part in this research because you are a full-time or part-time counseling students who is currently enrolled in a CACREP accredited master’s level Counselor Education program or a CACREP accreditation in progress master’s level Rehabilitation and Career Counseling and Substance Abuse and Clinical Counseling program at East Carolina University. The amount of time it will take you to complete this survey is approximately ten minutes.

If you agree to take part in this survey, you will be asked questions that relate to your general attitudes toward and experiences with Complementary and Alternative Medicine (CAM) or Complementary Interventions (CAI).

This research is overseen by the East Carolina University Institutional Review Board (IRB). Therefore some of the IRB members or the IRB staff may need to review my research data. However, the information you provide will not be linked to you. Therefore, your responses cannot be traced back to you by anyone, including me or your professors.

If you have questions about your rights when taking part in this research, call the Office of Research Integrity & Compliance (ORIC) at phone number 252-744-2914 (8:00 a.m. – 5:00 p.m.). If you would like to report a complaint or concern about this research study, call the Director of ORIC at 252-744-1971

You do not have to take part in this research, and you can stop at any time. If you decide you are willing to take part in this study, continue on with the attached survey. Thank you for taking the time to participate in my research.

Sincerely,

Celeste S. Crawford
Principal Investigator

APPENDIX C: SURVEY

Survey of Knowledge and Attitudes of Counseling Students Toward CAM/CAI (SKACST-CAM/CAI)

Survey of Knowledge and Attitudes of Counseling Students Towards CAM/CAI

Department: ___ DARS ___ COAD
Your Gender: ___ Male ___ Female ___ Other
Your Age: ___ Years

Ethnic/Racial Background:
 Asian/Pacific Islander American Indian/Alaskan Native
 Black/African American Hispanic Multi Racial
 White/Not Hispanic Other

1. General Attitudes Toward Complementary and Alternative Medicine (CAM) or Complementary Interventions (CAI):
For each of the following statements, indicate how closely it represents your general feelings about CAM/CAI.

1=Very Strongly Agree; 2=Strongly Agree; 3=Agree; 4=Disagree; 5=Strongly Disagree; 6=Very Strongly Disagree; X=Neutral

- ___ Clinical care should integrate conventional and CAM/CAI practices.
- ___ CAM/CAI includes ideas and methods from which counseling could benefit.
- ___ While we need to be cautious in our claims, a number of CAM/CAI approaches hold promise for the treatment of mental health issues.
- ___ The results of CAM/CAI are in most cases due to a placebo effect.
- ___ CAM therapies not tested in a scientific manner should be discouraged.
- ___ While a few CAM approaches may have limited health benefits, they have no true impact on treatment of symptoms, conditions, and/or diseases.
- ___ CAM/CAI is a threat to public health.
- ___ I hope to have some CAM/CAI practices available to patients in my practice or professional network.
- ___ Health professionals should be able to advise their patients about commonly used CAM/CAI methods.
- ___ CAM/CAI practices should be included in my school's curriculum.
- ___ Knowledge about CAM/CAI is important to me as a student/future practicing counselor.

2. Barriers to Use of CAM/CAI Practices in Traditional Settings

Include:

Use scale above.

- | | |
|--|-----------------------------------|
| ___ Lack of evidence for practices | Institutional concerns about: |
| ___ Unavailability of credentialed providers | ___ Legal issues |
| ___ Lack of reimbursement | ___ Lack of staff training |
| ___ Too time-consuming | ___ Lack of appropriate equipment |
| ___ Other _____ | |

3. CAM/CAI Approaches: "Alternative" or Mainstream?

Historically, some "alternative" approaches reach a point where they are considered "orthodox" or mainstream. For each of the modalities listed below, indicate how you identify each therapy.

1=Clearly Mainstream, 2= Neither Clearly Mainstream nor

Alternative 3=Clearly Alternative, X= Unfamiliar with this modality

- | | |
|--------------------------------|-------------------------------|
| ___ Acupuncture | ___ Hypnosis/guided imagery |
| ___ Biofeedback | ___ Massage |
| ___ Chiropractic | ___ Nutritional supplements |
| ___ Herbal medicine | ___ Prayer/spiritual healing |
| ___ Homeopathy | ___ Meditation |
| ___ Bioelectromagnetic therapy | ___ Therapeutic/healing touch |

Do you have a disability? ___ Yes ___ No

How many credit hours have you completed?

4. Personal Use

For each of the following CAM/CAI practices, have you used it personally?

1=yes

0=no

- ___ Acupuncture
- ___ Biofeedback
- ___ Chiropractic
- ___ Herbal medicine
- ___ Homeopathy
- ___ Bioelectromagnetic therapies
- ___ Hypnosis/guided imagery
- ___ Massage
- ___ Nutritional supplements
- ___ Prayer/spiritual healing
- ___ Meditation
- ___ Therapeutic/healing touch

5. CAM/CAI Approaches in Your Practice:

For each of the following CAM/CAI approaches, how do you intend to use it in your practice—by personally providing it or by referring patients to trained providers?

1=Would Not Recommend, 2=Would Endorse but Not Personally Provide or Refer, 3=Would Provide Personally, 4=Would Refer to a CAM/CAI Practitioner

- | | |
|----------------------------------|-------------------------------|
| ___ Acupuncture | ___ Hypnosis/guided imagery |
| ___ Biofeedback | ___ Massage |
| ___ Chiropractic | ___ Nutritional supplements |
| ___ Herbal medicine | ___ Prayer/spiritual healing |
| ___ Homeopathy | ___ Meditation |
| ___ Bioelectromagnetic therapies | ___ Therapeutic/healing touch |

6. Overall Comments:

Any other comments you have on CAM/CAI practices or education would be welcome:
