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THE INTEGRATION OF COMPLEMENTARY AND ALTERNATIVE MEDICINE (CAM) INTO THE PRACTICE OF PSYCHOLOGY: A VISION FOR THE FUTURE

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ABSTRACT **Complementary and Alternative Medicine (CAM) has a long history of use with some modalities being in existence for thousands of years. In recent years there has been a greater awareness of the many benefits of CAM for promoting health and wellness as well as for ameliorating a wide range of conditions and ailments treated by psychologists and other health professionals. One vision of the future of the practice of psychology includes each psychologist developing and maintaining competence in CAM and integrating it into each client's care as is relevant and appropriate. Support is provided for the belief that CAM will play an important role in the practice of psychology for years to come. Relevant issues emphasized include an emphasis on Evidence Based Practice in Psychology, the needs and preferences of a rapidly diversifying society, and the increasing focus on health promotion, wellness, spirituality, and many non-Western traditions that are consistent with this approach. This article provides an overview of each of the 14 most widely used forms of CAM, discusses limitations in the current body of scientific evidence in support of CAM and makes recommendations for how psychologists should be integral in addressing them, highlights ethical issues that each psychologist will want to be cognizant of and address when integrating CAM into their practices, and makes recommendations for education, training, and practice.**

KEYWORDS :Complementary, alternative, medicine, practice, ethics.

INTRODUCTION

The profession of psychology is a vibrant one, with a history of consistently moving forward and integrating new innovations into existing practice. In their ongoing efforts to better meet the clinical needs of clients, practicing psychologists engage in lifelong learning, endeavoring to continually enhance their clinical competence (Barnett, Doll, Younggren, & Rubin, 2007). Psychologists rely on both clinical innovation and empirical support when considering changes to how they practice (Goodheart, Kazdin, & Sternberg, 2006). Yet, one area of innovation and one vision for the future of psychological practice involves looking back to the history of health care and mental health care, tapping into the wisdom of many hundreds of years of clinical experience. This vision of the future of the practice of psychology involves integrating Complementary and Alternative Medicine (CAM) into ongoing psychological practice. It is important to recognize that some psychologists may already be integrating many forms of CAM, such as biofeedback, hypnosis, or progressive muscle relaxation, without recognizing that they are a part of this growing field of integrative health care.

We propose that each practicing psychologist should possess a working knowledge of CAM and its many modalities; their uses, strengths, limitations, and contraindications; the ethical dilemmas and challenges psychologists may face when working with CAM, and when it may be appropriate for clients, either through integration into ongoing psychological treatment or through referrals to appropriately trained CAM practitioners. As will be seen, support is provided for the integration of CAM into ongoing psychological practice and recommendations are made for doing so ethically and competently. This focus on the integration of CAM into psychologists' practices is consistent with major trends impacting the profession of psychology and how many individuals conceptualize health care and how they choose to live their lives. These trends include Evidence Based Practice in Psychology (APA, 2005) with its attention to client preferences, needs, and individual differences, a greater focus on health promotion over disease management, and a more holistic and integrative view of health care in general. A vision of the future of psychological practice is presented, which includes knowledge of and competence regarding 576 CAM, as well as holistic and integrative health care trends, by all practicing psychologists and the integration of selected CAM modalities into psychologists' practices when it is consistent with their clients' best interests to do so.

What Is CAM?

CAM is "a group of diverse medical and health care systems, practices, and products that are not generally considered part of conventional medicine . . . (also called Western or allopathic medicine)" (NCCAM, 2011e, para 2). While often grouped together, complementary and alternative medicine are actually two separate forms of treatment, with complementary medicine used in addition to conventional forms of medicine and alternative medicine used instead of conventional medicine. Despite many CAM modalities being in existence for thousands of years, it was not until 1991 that the United States Congress passed legislation to provide two million dollars to "establish an office within the National Institutes of Health (NIH) to investigate and evaluate promising unconventional medical practices" (NIH, 2011, para 6). In 1992, the Office of Alternative Medicine (OAM) was established and in 1999, the National Center for Complementary and Alternative Medicine (NCCAM) was created as the 25th organizational component of the NIH (NIH, 2011). At present, the NCCAM "is the Federal Government's lead agency for scientific research on complementary and alternative medicine" (NCCAM, 2011d, para 1). NC- CAM's mission "is to define . . . the usefulness and safety of complementary and alternative medicine interventions and their roles in improving health and health care" (NCCAM, 2011e, para 2). While much work remains to be done, recent research efforts have begun demonstrating the effectiveness of many CAM modalities for the treatment of a wide range of ailments and disorders. A wide range of treatments and interventions exist under the heading of CAM. The literature documents dozens of interventions that are considered a part of CAM that fall within four main categories: Mind-Body Medicine, Biologically Based Practices,

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Manipulative and Body Based Practices, and Energy Medicine (NCCAM, 2011e). Additionally, CAM may be viewed in the context of Whole Medical Systems, which include Traditional Chinese Medicine, Ayurvedic Medicine, Naturopathy, and Home- opathy. Each of these areas encompasses a wide range of CAM treatments. The CAM modalities included in this article, and presented in the order of their frequency of use, are those reported in a large national survey conducted for the National Institutes of Health (Barnes, Bloom, & Nahin, 2008): dietary supplements, meditation, chiropractic, aromatherapy, massage therapy, yoga, progressive muscle relaxation; spirituality, religion and prayer; movement therapy, acupuncture, Reiki, biofeedback, hypnosis, and music therapy. Those modalities presented here that were not included in the survey data provided by Barnes, Bloom, and Nahin (2008) were chosen for inclusion after reviewing the relevant literature on CAM based on their frequency of use. A brief review of these 14 most frequently used CAM modalities is provided to offer a basic introduction to each of these modalities.

Dietary Supplements

Dietary supplements are "intended to supplement the diet" and they contain at least one of many "dietary ingredients (including vitamins; minerals; herbs or other botanicals; Amino Acids; and other substances) or their constituents" (Office of Dietary Supplements [ODS], 2011, para 1). Additionally, dietary supplements should be taken orally, "often in the form of a pill, capsule, tablet, or liquid" (ODS, 2011, para 1). Commonly used dietary supplements include gingko biloba, St. John's wort, vitamin supplements, and Echinacea. Many dietary supplements are used to promote health and wellness as well as to treat pain, depression, and anxiety (Geier & Konstantinowicz, 2004).

Dietary supplements are regulated by the Food and Drug Administration (FDA) but are held to very different quality standards than more conventional forms of medicine. Of specific note, the FDA does not review the safety and/or effectiveness of any supplements prior to them being sold. Thus, the potency or composition of the supplements may vary between manufacturers or even within a single manufacturer's batches of a supplement. Much of the research findings are variable with regard to dietary supplements due to this lack of regulation. It is essential that psychologists are aware of the potential risks that may come with utilizing dietary supplements so that they are able to competently advise their clients about their use, such as by referring them to their physicians when indicated. Despite the risks, approximately 17.7% of individuals surveyed had taken a dietary supplement in the past year, according to Barnes et al. (2007). While psychologists might educate clients on the substances themselves, they should be making referrals to primary care physicians, because they are capable of monitoring blood levels as well as watching for various potential interactions. But, possessing sufficient knowledge about the dietary supplements that many clients will be using is important so that psychologists will be able to appropriately educate and refer their clients as is needed.

Meditation

Meditation is a process by which people learn to focus their attention as a way of gaining greater insight into themselves and their surroundings (Duke Center for Integrative Medicine [DCIM], 2006) and was reported to be practiced by 9.4% of the adults surveyed by NIH in 2007 (Barnes et al., 2008). When meditating, clients must focus their attention on "breathing, or on repeating a word, phrase or sound in order to suspend the stream of thoughts that normally occupies the conscious mind" (Mayo Clinic, 2010b, p. 103). Presently, there are several different forms of meditation, each of which falls into one of two categories: mindfulness meditation and concentrative meditation. Mindfulness meditation "focuses attention on breathing to develop increased awareness of the present" while concentrative meditation aims to increase overall concentration by focusing on a specific word or phrase (NCCAM, 2011c, para 5). While there are many different types of meditation in each category, such as Vipassana, transcendental, and walking meditation, most forms of meditation "have four elements in common: a quiet location . . . a specific, comfortable posture . . . a focus of attention . . . [and] an open attitude" (NCCAM, 2011c, para 7). Meditation is used to treat a variety of symptoms such as elevated blood pressure, anxiety, stress, pain, and insomnia, as well as to promote overall health and wellbeing (Grossman, Niemann, Schmidt, & Walach, 2007; Rainforth et al., 2007).

Meditation is an area of CAM that can be integrated into ongoing psychological practice. But, it is important that clinicians are appropriately trained and that clients are also trained prior to attempting to meditate on their own. There are no qualifications necessary for practitioners of general meditation; however, there are a variety of organizations that offer certification in specific forms of meditation such as mindfulness-based meditation and transcendental meditation. Psychologists looking to integrate meditation into their practice will want to first assess the legitimacy of particular organizations before seeking certification through them.

Chiropractic

The main theory behind the field of chiropractic is "that nerve and organ dysfunction is often the result of misaligned vertebrae of the spine" (Kuusisto, 2009, para 9). Doctors of Chiropractic use noninvasive treatments such as spinal manipulations or chiropractic adjustments (American Chiropractic Association [ACA], 2011). The purpose of these manipulations "is to restore joint mobility by manually applying a controlled force into joints that have become hypomobile— or restricted in their movement—as a result of a tissue injury" (ACA, 2011, para 3). An essential component of chiropractic is that optimal functioning is achieved when the spine is in alignment (Kuusisto, 2009). Thus, the ultimate goal of chiropractic is to realign the spine so that the body functions best and can in turn heal itself. Chiropractic is used by 8.6% of Americans each year to treat a range of ailments from pain and headaches to stress and ADHD, among others (Assendelft, Morton, Yu, Suttorp, & Shekelle, 2008; Bastecki, Harrison, & Haas, 2004; Tuchin, 1999).

To practice chiropractic, one must obtain a doctor of chiropractic degree, which takes several years of graduate work to earn. Thus, while most psychologists will not likely also obtain the doctor of chiropractic degree, it is important to recognize that even if certification is obtained, serving as a client's chiropractor at the same time as serving as their psychologist would be inappropriate due to the type of touch needed for spinal manipulations. This use of touch would likely constitute a significant boundary violation, a topic that will be discussed in further detail later.

Aromatherapy

Aromatherapy is "the art and science of utilizing naturally extracted aromatic essences from plants to balance, harmonize and promote the health of body, mind and spirit" (National Association for Holistic Aromatherapy [NAHA], 2010, para 5). There are three different types of aromatherapy: clinical, holistic, and aesthetic (Metcalfe, 1989). Clinical aromatherapy focuses on relieving symptoms that are typically addressed in psychotherapy, such as stress and anxiety. Holistic aromatherapy focuses on the whole person, aiming to improve overall well-being and quality of life. Aesthetic aromatherapy, also termed nonclinical aromatherapy, utilizes aromatic essences in various oils and creams that are traditionally used in skin care (Metcalfe, 1989). Using various scents and oils for therapeutic purposes has been in existence for thousands of years. In recent years aromatherapy has been increasingly studied and has shown positive results when used to treat a variety of symptoms to

include pain, anxiety, and agitation specific to dementia (Han, Hur, Buckle, Choi, & Lee, 2006; Lehrner, Marwinski, Lehr, Johren, & Deecke, 2005; Lin, Chan, Ng, & Lam, 2007). Aromatherapy can be integrated into ongoing practice and while certification is not required, it is recommended. Several organizations, such as the NAHA, offer certification to become a registered aromatherapist. There are risks associated with aroma- therapy use related to toxicity, skin irritation, and dosing regulations that competent professionals will be aware of.

Massage Therapy

Massage therapy is a manual procedure that involves manipulating the soft tissue of the body as a way to relieve tension and pain as well as anxiety and depression (Moyer, Rounds, & Hannum, 2004; Rich, 2002). Massage therapists use their hands, fin- gers, and sometimes their forearms or their feet, as a way to "relieve pain, rehabilitate sports injuries, reduce stress, increase relaxation, address anxiety and depression, and aid general wellness" (NCCAM, 2011b, para 8). There are several different types of massage, each utilizing slightly different techniques. For example, Swedish massage, the most commonly used form of massage in the United States, involves "a combination of long strokes, kneading motion, and friction on the layers of muscle just beneath the skin" (DCIM, 2006, p. 469). Other well-known forms of massage include sports massage, deep tissue massage, and trigger point massage (NCCAM, 2011b). In 2007, 8.3% of adults were reported to have used massage therapy in the past year (Barnes et al., 2008). The use of massage has been studied for its effectiveness in treating various symptoms that present to psychologists, such as depression, anxiety, and stress, and thus it may be relevant for integration into some clients' treatment. However, this integration must be done by referral to qualified massage therapists even if the psychologist is appropriately trained, due to boundary concerns mentioned previously. The regulations for practicing massage vary from state to state. Presently, there are 43 states that regulate massage therapy but national certification can be obtained through the National Certification Board for Therapeutic Massage and Bodywork (NCBTMB).

Yoga

Yoga is a form of CAM that incorporates several techniques such as meditation, breathing exercises, sustained concentration, and physical postures, which work to increase strength and flexibility (Khalsa, Shorter, Cope, Wyshak, & Sklar, 2009). A main focus of yoga is to bring about relaxation while working to "balance the mind, body, and the spirit" (NCCAM, 2011f, para 5). There are many different types of yoga such as Hatha, Ananda, Anusara, Bikram, Kundalini, and Viniyoga. In recent years, yoga has been increasingly studied and it has been shown to be effective at treating numerous symptoms including anxiety, depression, and chronic pain (Harner, Hanlon, & Garfinkel, 2010; Mehta & Sharma, 2010; Sherman, Cherkin, Erro, Miglioretti, & Deyo,2006). With such a wide range of uses, it is not surprising that in 2007, 6.1% of adults indicated that they had practiced a form of yoga in the preceding year (Barnes et al., 2008). Since the practice of yoga does not require any physical manipulation of the client by the psychologist, it is an area that may be integrated into ongoing treatment as appropriately trained psychologists may choose to begin a session by utilizing various poses to promote relaxation. Additionally, clients who might benefit from yoga in addition to their ongoing psychological treatment may be referred to qualified yoga practitioners. As with many other CAM modalities, certification is required to practice yoga but the certification process is not standardized.

Progressive Muscle Relaxation

Progressive muscle relaxation (PMR) is a technique in which the client learns to sequentially tense and relax various groups of muscles as a way of promoting greater relaxation. PMR is often beneficial for clients who are experiencing anxiety, tension, or stress-related symptoms. With these symptoms being common to a variety of disorders, it is not surprising that PMR has a wide range of applicability within the field of psychology. Despite the fact that it has been accepted and integrated into practice by psychologists for many years, results of the NIH study showed that only 2.9% of adults had used PMR in the prior year (Barnes et al., 2008). PMR is one aspect of CAM that does require significant effort and outside time-commitment on the part of the client. PMR should not be viewed as a simple solution to stress reduction and it is important that clients are aware of the fact that their success with PMR is highly dependent on the effort that they put forth in terms of learning the process and practicing in between treatment sessions (Lehrer & Woolfolk, 1993). Psychologists may want to take clients through various PMR exercises during a psychotherapy session followed by offering them a recording of a relaxation sequence that can then be used outside of psychotherapy. PMR is one area of CAM that psychologists can effectively integrate into their practices with minimal training.

Spirituality, Religion, and Prayer

According to the U.S Religious Landscape Survey, 56% of those surveyed indicated that religion was *very important* to them while 26% reported that it was *somewhat important* to them (The Pew Forum on Religion & Public Life, 2008), indicating that spirituality, religion, and prayer are likely areas of CAM that clients may already be relying on, without even realizing that they are a part of CAM. Spirituality and religion are actually two separate entities such that spirituality tends to be more personalized while religion is often more formally organized. Clients may identify themselves as only spiritual or religious, and not both. Spirituality, religion, and prayer are three areas that have been difficult to study. Yet, despite various design issues, studies have shown that they have been commonly involved in the treatment of addiction, depression, and the symptoms of trauma (Cook, 2004; Nasser & Overholser, 2005; Vis & Boynton, 2008).

Spirituality, religion, and prayer can each be integrated in psychologists' ongoing practice and technically no certification is required to do so. However, competence about the religion or faith-based practices being addressed is essential. Additionally, psychologists will want to be aware of the fact that practicing a particular faith does not make one competent to utilize it into their psychotherapy practice. While spirituality, religion, and prayer can be a part of ongoing practice, psychologists should not exceed their clinical role and take on the role of clergy. Clinicians who are interested in integrating spirituality, religion, and/or prayer into ongoing practice will want to first obtain the education and training necessary to ensure their clinical competence.

Movement Therapy

Movement therapy is the "psychotherapeutic use of movement to promote [the] emotional, cognitive, physical, and social integration of individuals" (American Dance Therapy Association [ADTA], 2009b, para 1). Often referred to as dance/movement therapy (DMT), it focuses on "movement behavior as it emerges in the therapeutic relationship" (ADTA, 2009b, para 1). A goal of DMT is to use the body's movement as a way of expressing the unconscious (Levy, 1988). Dance/movement therapists believe that the mind and the body do not function separately and that by focusing on the body, one should be able to impact their mind and therefore relieve a variety of symptoms (Levy, 1995). While research in the field of DMT is rather limited and more research is needed to support and guide the use of DMT the ADTA has reported some support of DMT's use to help treat a variety of symptoms such as those associated with ADHD, dementia, depression, and a variety of physical disabilities, as well as promote overall wellbeing (ADTA, 2009a). With DMT being one of the lesser known CAM modalities, only 1.5% of adults reported that

they had used DMT in the previous year (Barnes et al., 2008). Certification is required to practice DMT and it requires a graduate degree from an ADTA approved program.

Acupuncture

Acupuncture is a technique used to improve health and functioning "through stimulation of specific points on the body" that has been in existence for thousands of years (NCCAM, 2011a, para 1). Barnes et al. (2008) reported that 1.4% of adults indicated having used acupuncture in the preceding year. Typically, acupuncture involves penetrating the skin with needles, which are then manipulated by the acupuncturist's hands or by a form of electrical stimulation (NCCAM, 2011a). The needles are inserted into specific locations on the body as a way of balancing "the flow of life energy" which is also known as *qi* (DCIM, 2010, p. 464). Acupuncture has been shown to be effective at relieving symptoms of depression and anxiety, as well as migraines and other forms of chronic pain (Furlan et al., 2010; Roschke et al., 2000).

Certification is required to practice acupuncture and only physicians who have completed additional training, acupuncturists, and doctors of oriental medicine can practice acupuncture. Additionally, in some states, licensure is required to practice acupuncture while others require certification through the National Certification Commission for Acupuncture and Oriental Medicine (NCCAOM) in addition to licensure. Psychologists, even if certified, should not serve as a client's acupuncturist as well as his or her psychotherapist due to the fact that acupuncture often involves the client removing articles of clothing, a clear boundary violation. Additionally, in some states, it is illegal for psychologists to provide any forms of treatment that involve piercing of the skin.

Reiki

The term Reiki means "spiritually guided life force energy" (The International Center for Reiki Training, 2011, para 1). Reiki involves the passing of energy from a trained Reiki practitioner's body to the client's body as a method of healing. The client can remain fully clothed as it is believed that the Reiki energy can easily pass through clothing or other objects (Plodek, 2009). The Reiki practitioner utilizes a series of established hand positions as a means for allowing the energy to move freely between the bodies.

With only 0.5% of the population reporting use of Reiki (Barnes et al., 2008), there is not a significant amount of research studying its efficacy. Despite this, Reiki has been shown to help with stress and pain management, as well as promoting relaxation (Bowden, Goddard, & Gruzelier, 2010; Olson, Hanson, & Michaud, 2003). To practice Reiki, certification is required. Referrals should be made for Reiki services, as opposed to integrating into ongoing practice, as the hand positions will likely result in a boundary issue. Even though there is no direct contact, the clinician's hands are placed very close to the client's body.

Biofeedback

Biofeedback utilizes various forms of equipment as a way of *feeding back* information, which "enables an individual to learn how to change physiological activity for the purposes of improving health and performance" (Association for Applied Psychophysiol- ogy and Biofeedback [AAPB], 2008, para 2). When using biofeed- back, the client is connected to various electrical sensors that "measure and receive information (feedback) about the client's body" (Mayo Clinic, 2010a, para 1). The three most common forms of biofeedback are electromyography (EMG), which focuses on muscle tension, thermal biofeedback, which focuses on skin temperature, and neurofeedback or electroencephalography (EEG), which focuses on brain activity (Ehrlich, 2009). A fourth form of biofeedback, heart-rate variability (HRV), is becoming increasingly popular and is growing in use. Biofeedback has been shown to be effective in the treatment of ADHD, pain, depression, and headaches, among other symptoms (Fuchs, Birbaumer, Lut- zenberger, Gruzelier, & Kaiser, 2003; Hawkins & Hart, 2003; Karavidas et al., 2007; Nestoriuc, Martin, Rief, & Andrasik, 2008). It is reported that 0.2% of adults utilize biofeedback (Barnes et al.,2008) and the Association of Applied Psychophysiology and Bio- feedback reports having over 2,000 professional members (AAPB,2008) and the Biofeedback Certification International Alliance report having approximately 1,600 certified members (Judy Craw- ford, personal communication, February 20, 2012).

Biofeedback is an area of CAM that can be integrated into ongoing treatment with relative ease by appropriately trained psychologists utilizing biofeedback equipment. While formal certification is not required, it can be obtained through the Biofeedback Certification International Alliance (BCIA), "the certification body for the clinical practice of biofeedback" (BCIA, 2011, para 14).

Hypnosis

The Society of Psychological Hypnosis defines hypnosis as a process by which "one person (the subject) is guided by another (the hypnotist) to respond to suggestions for changes in subjective experience, alterations in perception, sensation, emotion, thought or behavior" (Green, Barabasz, Barrett, & Montgomery, 2005, p.89). With only a 0.2% rate of use (Barnes et al., 2008), it is not surprising that the field of hypnosis is one that clients may not associate with having health benefits; when many people hear the term hypnosis, they think of it being used for entertainment purposes. Thus, psychologists will want to educate clients about the utility of hypnosis, while emphasizing that the purpose is not to gain control over another human being. With that, clients should recognize that they will not be made unconscious during the hypnotic procedure and that they will remember what has taken place.

As an example, hypnosis is commonly used to treat pain and fatigue, as well as nausea and vomiting that occur as a side effect of cancer treatments (Castel, Salvat, Sala, & Rull, 2009; Jensen et al., 2011; Montgomery et al., 2001). Hypnosis can be integrated into ongoing practice and one must obtain certification although this is not standardized. Several organizations offer certification with one of the most well-known being the American Society of Clinical Hypnosis (ASCH) which offers entry-level and advanced- level certifications (ASCH, 2011).

Music Therapy

The American Music Therapy Association (AMTA) defines music therapy as "an established health profession in which music is used within a therapeutic relationship to address physical, emotional, cognitive, and social needs of individuals" (AMTA, 2011a, para 2). Music therapy involves singing, writing music, making music, listening to music, and lyric analysis, among many other techniques (AMTA, 2011b). Psychologists will want to make their clients aware that the quality of their music is not what impacts the therapeutic process. Rather, the focus should be on helping clients to explore their thoughts and feelings through the use of a music intervention. Music therapy is a multidimensional approach in that it focuses on a variety of "facets—physical, emotional, mental, social, aesthetic, and spiritual" as a means to improve health (Boyer College of Music and Dance, [BCMD], 2011, para 1).

Some evidence is provided that supports music therapy's use to reduce anxiety, depression, and pain although the literature is limited (Castillo-Pe´rez, Go´ mez-Pe´rez, Calvillo Velasco, Pe´rez- Campos, & Mayoral, 2010; Lin, Hsieh, Hsu, Fetzer, & Hsu, 2011). Music therapy may ethically and appropriately be integrated into ongoing psychological treatment by appropriately trained psychol- ogists.

Certification is required and can be obtained after earning a graduate or undergraduate degree from an AMTA approved program, plus 1,200 hours of supervised music therapy experience. Additionally, there is a written exam required to become a Music Therapist-Board Certified (MT-BC; AMTA, 2011a).

Why CAM Today?

Many forms of CAM have existed for centuries as most forms of CAM were present in more traditional forms of medicine from non-Western cultures (e.g., Traditional Chinese Medicine, Ayurvedic Medicine). Consistent with demographic trends in the United States the population of the United States has been rapidly diversifying in recent years (U.S Census, 2010). Many immigrant communities have brought with them their beliefs and practices relevant to health promotion and health care. Further, these groups have had and continue to have a profound impact on the general population and culture around them. Additionally, the overall population has exhibited a greater interest in general wellness and health promotion in recent years with many individuals seeking out CAM treatments as a result. Recent trends such as the significant focus on mindfulness, meditation, yoga, Buddhist principles, and spirituality in daily life are but a few representative examples (e.g., Kabat-Zinn, 1990, 2003; Serlin, 2007; Shafranske & Maloney, 1990), each of which emphasizes the connection between the physical and the psychological or spiritual in contrast to Western medicine's general emphasis on physical conditions, and a greater focus on well functioning and enhanced quality of life than on disease management.

The use of CAM and its integration into both daily life and health care are part of a larger movement in the United States (and other Western nations) that focuses on more integrative and holistic care. Many individuals now seek the use of these modalities either instead of or in addition to modern industrialized medicine and are making known these preferences to health care practitioners, resulting in changes in how health care is practiced. In the 2009 national health statistics survey, 55% of all individuals surveyed reported the belief that the use of various CAM modalities in addition to conventional medical care results in improved health (NIH, 2011).

The Current State of Research on CAM

Several CAM modalities have been in use for thousands of years and many of them are widely accepted by the public for their known benefits for promoting health and wellness as well as for ameliorating a wide range of ailments. Yet, consistent with the tenants of evidence based health care, in recent years, research on the effectiveness and underlying mechanisms of the many CAM modalities has greatly increased. While this is quite promising, psychologists should be cognizant of the potential limitations associated with some of this research, being thoughtful and critical consumers of this literature who exercise caution in interpreting research findings, as well as actively participating in the study of CAM, bringing increased scientific rigor to this inquiry.

In the current research literature on CAM, there are numerous issues related to participant recruitment as well as how participants are assigned to treatment conditions. For example, in some studies participants were simply grouped by where they lived, as opposed to utilizing random assignment, and thus there were several extraneous participant variables that may have impacted the results (Rho, Han, Kim, & Lee, 2006). Other studies have utilized convenience samples due to the difficulties that can be associated with recruiting participants (Louis & Kowalski, 2002). While in some ways these approaches may have been practical, it is important to be aware of the limitations associated with the conclusions drawn from the results of studies not using random sampling or random assignment.

Further, much of CAM research utilizes case studies or the sample sizes are very small. In fact, many CAM studies have samples that are smaller than 10 subjects (Kunstler, Greenblat, & Moreno, 2004). In many instances, the small sample sizes were a result of strict recruitment procedures within various quantitative studies, as much of the research on CAM tends to focus on a limited set of symptoms. While focusing on a specific population can provide beneficial results, issues of generalizability remain. An additional area of concern is the lack of no-treatment conditions in many studies, something that can contribute to stronger conclusions than control groups alone.

There are also considerable issues related to a lack of longitudinal studies. While many current findings are valuable and provide helpful information for understanding the efficacy of various CAM modalities, understanding their long-term effects is important as well, something that can contribute to CAM's use and acceptance. Another difficulty when conducting research with CAM is that certain modalities are easier to study than others. For instance, one can easily study the impact of chiropractic on back pain or the efficacy of PMR on stress. But, spirituality and religiosity, for example, are harder to operationalize and measure and, therefore, conducting research in this area is more challenging. However, it is important to remember that a lack of studies, and therefore a lack of support, does not mean that a particular modality is not useful.

Psychologists are uniquely qualified to rectify these limitations in the CAM literature, working to bring scientific rigor to the study of CAM. Ultimately, whether psychologists will be using these modalities in practice, recommending the modalities to clients, or simply monitoring and observing and responding to the effects of client-initiated CAM use on their clients, they must play a more active role in conducting the needed research so that any conclusions about the use of CAM may be made with sufficient confidence. Research is needed not just to determine when CAM might be appropriate and effective either as a primary treatment or adjunct to psychotherapy, but when CAM treatments are not appropriate and effective. To support this initiative, similar to psychologists' efforts with regard to other advances that have been made in the scope of psychological practice, psychologists are encouraged to participate in political advocacy efforts to help ensure that needed support for research, to include funding, is received.

Why Is CAM Important to Psychologists?

Psychologists are uniquely positioned to educate clients about CAM, to monitor their use of CAM, to communicate with primary care physicians (PCPs), and, if possessing the needed competence, they are also able to make crucial decisions about when CAM may be appropriate to include in a client's treatment. Recognizing when it is appropriate to integrate a specific modality into a client's psychological treatment as opposed to when to make referrals to CAM practitioners, and how to do this effectively, or to persuade them away, are essential components of each psychologist's competence.

In 2007, the NCCAM included a CAM specific addition to the National Health Interview Survey, the first to solely focus on CAM usage among children and adults. The survey's sample consisted of nearly 24,000 adults over the age of 18 and approximately 9,400 children (Barnes et al., 2008). Results of the survey indicated that 38.3% of adults and 11.8% of children reported having used a form of CAM in the preceding year (Barnes et al., 2008). This corresponds with nearly $34 billion dollars being spent each year "on various CAM products and visits to CAM practitioners" (Briggs,2007, para 1). Although this amount of money only accounts for 1.5 of the total amount spent on health care, it accounts for nearly 11.2% of out-of-pocket spending on health care (Briggs, 2007). Further, Eisenberg et

al. (1998) determined that there were 243 million more visits made to CAM practitioners than there were to primary care physicians (PCP) in the preceding year.

Elkins, Marcus, Rajab, and Durgam (2005) assessed CAM use among 262 people who were currently in psychotherapy. They found that 65% of respondents indicated that they had used at least one form of CAM in the past year. This finding specifically highlights the relevance of CAM in psychological practice because even if professional psychologists are not the ones presenting the modalities as treatment options, many clients are likely to be independently utilizing them. This further emphasizes that in order to provide the highest quality of care psychologists will find it important to be educated on various forms of treatment, both those that many clients may already be using when they enter a psychologist's care and those that may additionally be of benefit to them. Additionally, we must be aware of when clients should or should not continue with a CAM modality that has been previously implemented. Thus, psychologists must remain educated and up- to-date on the field of CAM as well as the various modalities and their diverse uses.

CAM is also relevant to psychologists and the care that they provide to their clients in the context of Evidence Based Practice in Psychology (EBPP; APA, 2005) which is described as "the integration of the best available research with clinical expertise in the context of patient characteristics, culture, and preferences" (para. 2). The emphasis on the consideration of "patient characteristics, culture, and preferences" when selecting treatment strategies and techniques is directly relevant to earlier reported data on societal trends toward health promotion, wellness, and spirituality, as well as the data on how many Americans are now seeking out CAM treatments either independently or through their health practitioners. The emphasis on "the best available research" highlights the need for psychologists to focus their research efforts on the many uses of CAM to create an expanded knowledge base about CAM, its uses, and its limitations. The emphasis on "clinical expertise" makes clear the need for psychologists to develop competence regarding CAM so that it may be appropriately applied to meet clients' ongoing needs.

Ethics Issues and CAM

There are several ethical issues relevant to the use of CAM that practitioners should be aware of and consider. Regardless of whether a particular CAM modality is being used in session or a referral is being made, these ethics issues must be addressed in order to provide the highest standard of care. There are several standards in the Ethical Principles of Psychologists and Code of Conduct [APA Ethics Code] (APA, 2010) relevant to the use of CAM. First, psychology practitioners must be knowledgeable about CAM: its uses, limitations, interactions with other treatments, contraindications, and its potential benefits. The fact that one practices a form of CAM in one's personal life should not be considered an indicator of sufficient competence to provide CAM treatments to clients. Standard 2, Competence, addresses the requirement that psychologists possess the needed knowledge and skills to be able to practice effectively and to not practice outside areas of demonstrated competence. Further, psychologists are required to maintain their competence through ongoing professional development activities that include keeping informed about recent developments in the field. Finally, psychologists are required to base clinical decisions and treatments provided on "established scientific and professional knowledge of the discipline" (APA, 2010, p. 5), further emphasizing the need to remain current on the scientific literature relevant to clients' treatment needs and helping to ensure adherence with Ethical Standard 3.04, Avoiding Harm. Ethical Standards 3.10, Informed Consent, and 10.01, Informed Consent to Therapy, require that psychologists share sufficient information with clients at the outset of the professional relationship so that clients may make informed decisions about their participation in the proposed treatment. Essential components of the informed consent process include a review of reasonably available options and alternatives along with a discussion of the potential risks and benefits of each. Accordingly, to fulfill this ethical obligation, each psychologist will want to include discussion of reasonably available treatment options. For many presenting problems, this discussion should include various CAM modalities whose use for particular difficulties is supported by the relevant scientific literature.

As has been highlighted, there are several CAM modalities that are appropriate for psychologists to integrate into treatment with their clients when appropriately trained and credentialed to do so. Yet, with several of these modalities, administering these treatments to current psychotherapy clients would constitute an inappropriate multiple relationship (Standard 3.05) and a boundary violation. When a CAM modality is implemented through physical contact, such as with Massage Therapy, Chiropractic, and Reiki, psychologists should be especially sensitive to boundary issues that make their use by the psychologist with a psychotherapy client inappropriate.

Ethical Standard 3.09, Cooperation With Other Professionals, is also relevant since many clients will need their psychologist to communicate and coordinate treatment with their primary care physician. When referrals are made to CAM practitioners to provide treatment complementary to the psychological treatment, it will typically be in the client's best interest to coordinate this care and at times to work collaboratively with the CAM practitioner.

CONCLUSION

With so many consumers of psychological services already utilizing CAM in their lives (both with benefit and with potential risks) and with so many clients' presenting problems being potentially amenable to various CAM modalities, and consistent with current trends in holistic health care, wellness, and health promotion, we envision that psychology in the future will have every practitioner psychologist assessing for past and current use of CAM with clients as well as assessing each client's needs for integrating CAM into their treatment, when its use is supported by relevant research. Thus, ethical psychologists will know about CAM regardless of whether or not they personally offer CAM services so they can best meet the needs of a diverse clientele.

Accordingly, all practicing psychologists should have at least a basic level of familiarity with CAM and the relevant literature about its uses, benefits, limitations, and contraindications. Not all psychologists will wish to become licensed or certified in each specific CAM modality, or even possibly in any of them, but all psychologists should have a working knowledge of a wide range of CAM modalities. Psychologists should possess sufficient knowledge to be able to share viable treatment options and alternatives with clients, thoughtfully discussing their relative merits and limitations, making appropriate referrals when indicated and integrating the preferred CAM modality into the client's ongoing treatment when indicated by the scientific literature and when the psychologist possesses the needed training and clinical skill to do so.

Psychologists wishing to integrate selected CAM

modalities into their ongoing treatment of clients will need to possess higher levels of competence and training. For some CAM modalities this will involve extensive training and culminate in licensure and certification (e.g., massage therapy, dance/movement therapy). For others, additional training in the form of continuing education courses will be needed (e.g., progressive muscle relaxation).

Consistent with a focus on Evidence Based Practice in Psychology as well as with the needs and preferences of our rapidly diversifying population, in the future, we hope that all training programs will integrate training on CAM into their curriculums through coursework and supervised placements to help promote the competence needed for addressing CAM with these clients. It is also hoped that psychologists will increasingly focus their research efforts on CAM and that this research will hopefully include larger studies with increased scientific rigor so that psychologists will have a better understanding of the effective uses and limitations of CAM to better assist their clients. We hope that this article will stimulate greater interest in CAM and that practicing psychologists and those who train future psychologists will see the importance of educating themselves in this ever-growing area.

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