

Cultural Diversity in Healthcare: Conventional Western Healthcare working with
Complementary and Alternative Medical Systems

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Abstract

Patients across the United States come from a diverse background when it comes to spiritual matters weighing so heavily in the holistic healthcare experience. Complementary Alternative Medicine (CAM) has grown over the last several decades to encompass a wide assortment of therapies and medicinal regimens that fit specific spiritual and psychosomatic needs of many cultures and ethnic groups. A growing need in current medical communities is a focus of treatments for various psychosomatic disorders which lead to physical illness. The intent of this discussion is to shed light on the growing need for a working knowledge of Complementary Alternative Therapies within the Conventional Western Medicine community so that healthcare providers may appropriately recommend appropriate adjunct alternative therapies to patients of all cultural persuasions. Data from 88,962 adults aged 18 and older as part of 2002, 2007, and 2012 National Health Interview Survey were evaluated and used for this report. Data from practicing physicians and nurse practitioners nationwide was studied to ascertain level of CAM awareness within the conventional Western healthcare community. The use of yoga, tai chi and qigong increased during the decade studied while the use of any complementary health approaches also differed by selected sociodemographic characteristics.

Keywords: Cultural diversity and CAM, ethnics, race, healthcare, US healthcare and

Complementary and Alternative Healthcare, PTSD and CAM

Cultural Diversity in Healthcare: Conventional Western Healthcare working with Complementary and Alternative Medical (CAM) Systems

According to the Centers for Disease Control and Prevention, in 2013, 41,149 suicides were reported and 494,169 people went to the hospital for self-harm related injuries (American, 2014). Suicide is now the 10th leading cause of death in America (American, 2014). For every one person that commits suicide, twelve harm themselves (American, 2014). Suicide is often linked to psychosomatic disorder (Suicide, 2015). Recent research suggests that psychosomatic disorder and stress have a direct effect on state of health and disease factors (deMello, 2015). When stressors are perceived in the limbic system, the brain sends signals through the sympathetic and parasympathetic systems ultimately acting on one another (deMello, 2015). The sympathetic system controls energy store and the parasympathetic system is involved in vegetative and restorative functions. When these are not in balance, illness and disease sets in.

Due to going through more trauma than other groups, some ethnic groups like African Americans and Hispanics may develop conditions like Post Traumatic Stress Disorder at a higher rate than Caucasians (“How common”, 2015). It was found that in Veterans who survived the Vietnam war, a larger percentage of African Americans, Hispanics and Native Americans were in combat (“How common”, 2015). In looking at current statistics on the emotional toll war can take on the human psyche, we find:

The number of Veterans with PTSD varies by service era:

- Operations Iraqi Freedom (OIF) and Enduring Freedom (OEF): About 11-20 out of every 100 Veterans (or between 11-20%) who served in OIF or OEF have PTSD in a given year.
- Gulf War (Desert Storm): About 12 out of every 100 Gulf War Veterans (or 12%) have PTSD in a given year.

- Vietnam War: About 15 out of every 100 Vietnam Veterans (or 15%) were currently diagnosed with PTSD at the time of the most recent study in the late 1980s, the National Vietnam Veterans Readjustment Study (NVVRS). It is estimated that about 30 out of every 100 (or 30%) of Vietnam Veterans have had PTSD in their lifetime.

PTSD is often chronic and is associated with significant adverse consequences, including high rates of depression and other psychiatric issues; narcotics addiction; suicide; social impairment, occupational deficits, impaired family functioning; decreased quality of life; and increased rates of medical morbidity, health risk behaviors, and health service use. PTSD alone out of six anxiety diagnoses was associated with suicidal attempts and ideations as found in a study analyzing data from the National Comorbidity Survey (Hudenko, 2015). Active duty personnel and Veterans increasingly request Complementary Alternative Medicine (CAM) interventions for treatment. Studies have found that mental health–related concerns are among the most common reasons for veterans seeking care from a CAM provider (Strauss, 2015).

The suggestion that the mind is linked to emotional processes and effects organic processes has been frequently described by physicians throughout our history. Hippocrates (460-377 BCE) suggested that we have four bodily fluids, humors, and when these are out of balance, disease occurs. The humoral imbalances which cause illness and disease also lead to emotional imbalances (deMello, 2015). Although Hippocrates may have had the details wrong, he provided guidance about a link between psyche, emotional health and physical well being. Emotional health and stability is often defined by cultural influences (de Mello, 2015; Astin, 1998).

Many of today's Complementary Alternative Medicine therapies address emotional wellness and stability (Astin, 1998; Hildreth, 2007). CAM has been defined by the National Center for Complementary and Integrative Medicine as a diverse medical and health care system, practices,

and products that are not presently considered to be part of conventional medicine (2015). Today CAM is evolving in the number of health insurance plans covering the various modalities, the number of interventions offered and availability across the spectrum in general (Coverage, 2015). The estimated use of CAM in the United States varies immensely across studies with figures ranging from 28.9 percent to 62 percent when healing by prayer was included (Hildreth, 2007). Variation within the studies exists in defining alternative healthcare practices. Some studies may consider as few as one or two to as many as twenty-seven types of CAM (Hildreth, 2007).

Centers for Disease Control and Prevention interview an average of 24,000 Americans periodically using the National Health Interview Survey (NHIS) to determine rates of CAM usage throughout the country based on various demographic and cultural issues. We are able to use this information to assist physicians in determining needs of patients in order to provide a more holistic healthcare experience. Although CAM therapy use and intervention has increased in recent years, conventional Western physician education has failed to keep pace with the increasing demands of clients who participate in these alternative forms of treatment. Several complementary health therapies demonstrated popularity in NHIS 2002, 2007 and 2012, the most recent years of survey administration. These therapies included deep breathing, meditation, chiropractic, osteopathic manipulation, massage, yoga, and guided imagery.

The National Center for Complementary and Integrative Health (NCCIH) suggests that CAM is both complementary and alternative as it incorporates non-orthodox healing modalities designed to serve as adjunct therapies to western medical treatment plans. NCCIH therefore addresses CAM more appropriately as Complementary Integrative Health (CIH) approaches. NCCIH breaks CAM down into two broad areas which are natural products and mind and body practices. Natural products would consist of herbals and botanicals, vitamins and minerals, and probiotics. Mind and body practices include acupuncture, massage therapy, meditation

exercises, movement therapies like pilates, relaxation techniques, spinal manipulation, Tai chi, Qigong and yoga.

Many of these integrative health approaches are currently under clinical studies for efficacy and safety in order to better understand the most appropriate uses and risks involved in using these nontraditional treatment therapies. Many studies have been designed to test drug-herb reactions in users and ascertain the key constituents and mechanisms of action of various herbal products. While many herbals and mind and body therapies have been clinically tested there is continued need for growth and advancement in the standardization of herbal products and therapies.

A survey of four international journal article databases, MEDLINE, EMBASE, Cochrane Library and CISCOR, found that only 12 of 100 studies that were published on or before 1998 used nationally representative databases (Hildreth, 2007). Only 4 of the 12 studies found were actually performed in the United States. It is evident that many ambiguities could arise when drawing conclusions about United States CAM use based on information contained in a majority report formed by international peer-reviewed studies. It is increasingly imperative that Conventional Western healthcare providers become familiar with various CAM therapies currently available on the market in order to serve the diverse demands of their clients.

Method

This comprehensive, qualitative research review is based on material from a systematic literature search conducted using four computerized databases including Google scholar, ProQuest, PubMed, and Directory of Open Access Journals. I performed a detailed review of 25 selected articles which were made up of randomized controlled trials. I analyzed studies to compare their characteristics, methods and findings. On the studies dealing with a specific CAM treatment, I compiled a summary of findings on each CAM modality based on qualitative and

semi-quantitative synthesis of the findings. I attempted to identify all surveys that documented statistical associations between CAM use and demographic and/or mental health factors, spiritual factors, and physician knowledge of CAM. I searched and analyzed articles that were published in English in peer-reviewed journals between January 1995 and December 2015. The following combination of keywords was searched:

1. Complementary Alternative Medicine and United States demographics
2. CAM and psychosomatic disorders
3. CAM or ethnic groups
4. Efficacy of CAM in the United States

Abstracts and articles were read for the relevance to the research discussion. Articles were selected for review if they met the following topic-related criteria: definition of CAM is consistent with the NCCIH definition of CAM; assesses CAM use; sample includes community based adults; assesses demographic characteristics of CAM users. The Centers for Disease Control and Prevention has conducted a national survey on the usage of CAM across demographics during the years 2002, 2007, and 2012, respectively. These reports were used to establish a background of CAM use among adults in the United States.

People from various demographic groups were studied in order to ascertain more about their CAM usage and their perceptions of their own healthcare experiences. Data was collected in order to design a comprehensive case taking questionnaire for practitioners to use when they interview patients in order to better understand the patients' spiritual and emotional needs when they are developing a treatment plan. A Power point presentation accompanies the questionnaire which provides a tool for physicians, nurses and healthcare practitioners who desire to learn about alternative medical approaches and the reasons associated with increased use of such.

CAM therapies including Herbalism, Phytotherapy, Homeopathy, Aromatherapy, Flower Remedy Therapy and Vibrational medicine were included. Identification of other systems of

alternative medicine based on culture and religion such as Jamu used by the Indonesian, Kampo used by the Japanese, and Tibbi Islam used by many Muslim people in the United States has been included so that Conventional Western Physicians will be aware of potential CAM therapies their clients may be using.

Results

More than one third of United States adults use CAM (“More than”, 2004) 33.2% adults surveyed in the NHIS 2012 survey had used CAM therapy in the past ten months (Clark, 2015) with the most common therapies being non-vitamin, non-mineral, natural products which decreased from 18.9% in 2002 to 17.7% in 2012. Deep breathing exercises decreased from 2002 11.6% to 10.9% in 2012, chiropractic use increased from 7.5% in 2002 to 8.4% in 2012, massage increased from 7.6% to 8.0% and yoga increased from 5.8% in 2002 to 10.1% in 2012. According to NHIS 2007, American Indians (50.3%), Caucasian (43.1%), Asian (39.9%) and African American (25.5%) were the groups most likely to have used CAM therapies in the preceding year (Barnes, 2008). Respondents said they were more likely to use CAM therapies when the costs of conventional care became a burden for them (Barnes, 2008). An increase was demonstrated in the use of acupuncture, deep breathing exercises, massage therapy, meditation, naturopathy, and yoga between 2002 and 2007(Barnes, 2008).

The studies find that people who use CAM are generally seeking better methods of improving their overall health and well being or they want to relieve symptoms that may be associated with chronic illnesses or the side effects of conventional treatments for these conditions. In 2007, the most commonly used non-vitamin, non-mineral, natural products used by adults were fish oil or omega 3 (DHA), glucosamine, echinacea, flaxseed oil, and ginseng (Barnes, 2008). In 2007, adults used CAM most often to treat musculoskeletal problems including back pain, neck pain, joint pain, arthritis and other musculoskeletal conditions (Barnes, 2008). A small increase was seen in CAM use for treating cholesterol problems in the 2007 survey.

According to the NHIS 2007, CAM use is more prevalent among women aged 30-69, adults with higher levels of education, adults living in the West, former smokers and adults who were hospitalized in the past year (Barnes, 2008). One fifth of adults with no health conditions and one fourth of adults with no doctor visits in the last twelve months used CAM therapies (Barnes, 2008).

Ayurveda, biofeedback, guided imagery hypnosis, and energy healing therapy all demonstrated a low rate of usage and had no significant changes across all three time points. CAM use among Hispanic adults declined from 2002 to 2012 from 26.4% to 22% (Clark, 2015). CAM use among Caucasian adults increased from 2002 to 2012 from 34.4% to 37.9% (Clark, 2015). Among African Americans CAM use declined from 2002 to 2012 from 22.9% to 19.3% (Clark, 2015).

An additional sub-study conducted in 2007 using the NHIS results of 2002 entitled *Use of Complementary and Alternative Medicine by Chinese American Women* found that 50 % of Chinese American women have used herbs at some point in their life to treat health conditions (Tsai, 2007). The next group with the highest rate of herbal usage in the United States is the Native American female population at 30% use of herbs to treat health conditions (Tsai, 2007). This can be compared with other U. S. female populations using herbs for health reasons which show Caucasian (29%), Hispanic (26%) and African America (21%) (Tsai, 2007). This study also found that many patients did not tell their physician about their use of alternative medicine therapies (Tsai, 2007). This is cause for great concern within the medical communities because it is indicative of a fundamental breakdown in communication between physician and patient.

A study of 302 physicians in the Denver, CO metropolitan area found that the majority of physicians polled have not recommended CAM to their patients. 60% expressed a desire for more education in CAM therapies. 50% of the physicians did not like discussing CAM therapies with their patients (Winslow et al., 2002). Massage therapy, relaxation techniques, acupuncture

and biofeedback were among the CAM modalities that physicians recommended most. Seventeen percent of the doctors never ask their patients about their CAM used and 52% said they ask patients about CAM use less than 50% of the time (Winslow et al., 2002). 76% of physicians reported having patients that use CAM. 59% had been asked about specific CAM treatments while only 48% recommended CAM therapies to their patients. The most cited reason for physicians wanting to learn CAM was that they wanted to dissuade use of CAM therapy if it was not safe and/or ineffective.

Discussion

Physicians and healthcare providers should become familiar with CAM therapies that will be effective for their clients in order to make referrals when necessary. Emotional stress is increasingly being recognized by holistic and conventional physicians as a tremendous contributor to physical manifestations of illness and disease (Gerber, 2001; deMello, 2015). In Vibrational Medicine, a commonly used CAM therapy, we learn about the subtle energies of the chakras and how they sustain the organs of the body. Emotional blockages of these energies can result in abnormal energy flow to the various physiological systems (Gerber, 2001). According to quantum physics, the world is created out of interacting and interdependent energy fields. There is current research that shows that cells' membranes contain proteins called Integral Membrane Proteins. These proteins respond to energy signals from the internal and external environments (Solanki, 2014; Liboff, A., 2004). Scientific research has established that cells communicate with weak electromagnetic signals (Solanki, 2014; Liboff, 2004). These findings acknowledge that biological behavior can be controlled by external and internal energy forces. Acupuncture treatments have been shown to produce information of much greater magnitude than nerve impulses (Solanki, 2014).

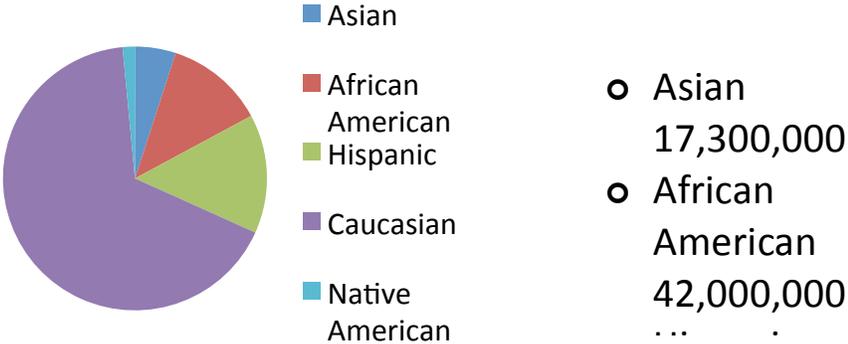
Recent research suggests that psychosomatic disorder and stress have a direct effect on our state of health and disease factors (deMello, 2015). When stressors are perceived in the limbic

system, the brain sends signals through the sympathetic and parasympathetic systems which ultimately act on each other (deMello, 2015). The sympathetic system controls our energy store and the parasympathetic system is involved in vegetative and restorative functions. When these are not in balance, illness and disease sets in.

Additionally, there are ample studies on cultural diversity and CAM usage in healthcare. There are not as many studies on the role patient spirituality/emotional wellness plays in health and wellness. Clinical evidence shows that people who self rate as being highly spiritual will generally use more CAM techniques more often than those who do not self rate as highly spiritual (Hindreth, 2007). This study explores CAM use in conjunction with Conventional Western medicine. The study differentiates between spirituality and religiosity. The difference between spirituality and religiosity is that religious individuals are more embedded in the community and orthodox organizations. The study purports that a religious worldview tends to constrain adherents from seeking non-traditional methods of medicine and providers. However, there are those members of society who identify with a particular religious sect that consider themselves to be more spiritually minded and use certain forms of CAM that are based solely on spiritual principles such as Unani-tibbi, used primarily by Muslims and Ayurveda, used primarily by Muslim and Hindu.

Currently the population of the United States is roughly 302,000,000 (“2010 Census”, 2015). The racial profile is as follows:

Race



If we break this down even further to explore the potential for CAM users to do so for spiritual reasons we see that the U. S. population religious profile is as follows:

Religion



With this information we can conclude that physicians will more than likely treat patients of varying cultural and religious backgrounds. These factors have been known to affect choices in medical care. Native Americans often seek treatment from spiritual healers from within their own tribe. As seen with veterans, African Americans, Hispanics, and Native American soldiers are more likely to develop PTSD because of increased exposure to traumatic events. It has been shown that Chinese Americans often seek help from practitioners of Traditional Chinese Medicine. Christians rely heavily on faith and prayer for and lean toward natural methods of healing. Many different ethnic groups use forms of Ayurvedic medicine including yoga. It is

pertinent that physicians realize the aspects of diversity that are associated with usage of alternative forms of therapy in order to develop a holistic plan of treatment as necessary.

Other factors that may be affecting the popularity of acupuncture, massage therapy, and naturopathy may in part be due to more states that license these practices and a corresponding increase in the number of licensed practitioners as of 2007. We have also seen an increase of information on the benefits of these practices in the media, social media and the press which could have fostered more participation. Increased opportunity and increased awareness are two major factors contributing to the rise in CAM use within the United States since the 1970s after a period of diminished use of alternative therapies in the 1940s and 1950s (American Public, 2005). While there was consistent evidence that women were more likely to use CAM than men, we have to remember that women also seek help from orthodox healthcare professionals more often than men do. CAM use may increase with higher education because income tends to increase with higher education.

As of 2007, The National Library of Medicine Journal database, Pubmed, identified 40 systematic reviews involving acupuncture, massage therapy, naturopathy, and yoga that were published between 2002 and 2007. Ten of the systematic reviews provided evidence that a specific CAM modality was efficacious with respect to a given condition: acupuncture and yoga for back pain (Manheimer, 2005; Slade, 2007), acupuncture for knee pain (White et al, 2007; Bjordal et al, 2007), acupuncture for insomnia (Chen et al, 2007), and acupuncture for nausea and vomiting (Ezzo et al, 2007; Helmreich et al, 2006; Shiao et al, 2006; Dune et al, 2006). A systematic review suggested that acupuncture and massage therapy should be a recommended therapy for treating back pain. This review is the basis for joint clinical practice of the American College of Physicians and the American Pain Society (Chou et al, 2007 a; Chou et al, 2007 b).

FDA and CAM

The FDA regulates natural products as food and not medicine. Herbal products in America are subject to the FDA's Good Manufacturing Practices guidelines. The FDA tried for many years to regulate the supplement industry but it was met with much opposition from the supplement industry. The opposition led to Congress passing the Dietary Supplement Health and Education Act which led to the FDA regulating supplements as food and not drugs (Stewart, 2007).

With regards to regulation, standardization of extracts and herbal supplements in the marketplace has become a focus in the CAM industry for many reasons. The chance for herbals to be adulterated with unintended ingredients is greatly reduced by standardization methods which include organoleptic, macroscopic, microscopic, and analytical procedures (Peterson, 2015). A standardized product focusing on active constituent concentration increases the reliability of natural products. The consistent composition of herbal products allows for more reliable studies on safety and efficacy. Standardization reduces the wide range of quality found in herbal products in years past.

The current definition of a natural dietary supplement as defined by the Dietary Supplement Health and Education Act (DSHEA) is a product that: ("Dietary", 2015).

1. will supplement the diet
2. contains one or more dietary ingredients (including vitamins, minerals, herbs or other botanicals, amino acids, and certain other substances) or their constituents
3. is taken by mouth, in forms such as tablet, capsule, powder, soft gel, gel cap, or liquid
4. is labeled as being a dietary supplement.

Given that dietary supplements are regulated under food and not drugs under FDA guidelines supplements are subject to different guidelines than other over-the-counter and prescription

drugs. The safety standards Under FDA regulations in 21 CFR part 111, states that all domestic and foreign companies that manufacturer, package, label or hold dietary supplements, including those involved with testing, quality control, and dietary supplement distribution in the U.S., must comply with the Dietary Supplement Current Good Manufacturing Practices (CGMPs) for quality control. If a company is found to be in noncompliance with these standards it could be penalized by the FDA (“About”, 2006).

Physician Training

In *Culture, Anthropology, and the Return of Complementary Medicine*, Micozzi (2002) speaks of the “mind-body” connection afforded by complementary medicine that is often missed in conventional western medicine. With respect to treatment of the entire person, Micozzi points out that we cannot rely on one system of medical care for the entire human family as well. Getting to know the client on a personal level is a key component to providing a meaningful healthcare experience. If we begin to open dialogue between patient and physician we will begin to experience a much more transparent healthcare experience.

Healthcare providers need the proper training and tools in order to adequately inform patients of all of their options. Mary E. Burman, Associate Professor for the School of Nursing, University of Wyoming, Laramie, Wyoming, conducted a study using a mailed questionnaire in which family nurse practitioner program directors described the current status of complementary and alternative medicine teaching in family nurse practitioner programs, identifying core competencies for family nurse practitioners. Most of the programs reported integrating some content on CAM. Rated among the highest competencies were subjects related to interviewing, critical thinking, evidence-based medicine, knowledge of laws and ethics and spiritual and cultural beliefs (Burnam, 2002). These findings aid in developing other curricula in order to prepare nurse practitioners for future practice.

Although there is a growing interest in CAM treatments, the education of most conventional healthcare providers is inadequate to properly advise patients on adjunct alternative therapies. Of 302 physicians surveyed in Denver, CO, 76% of the physicians reported having patients using CAM but only 48% had recommended CAM to a patient (Winslow, 2002). There are other studies showing that patients use CAM and fail to report it to their physician (Tsai, 2007). Better education of physicians will likely increase the numbers of physicians recommending CAM therapies to patients and will open patient/physician dialogue on the subject.

Doctors and nurses within the Western healthcare community have expressed a need for more education in CAM therapies because of the growing demand of such modalities. Family nurse practitioner (FNP), Mary Burnam, explains that conventional Western medicine is not always trusted because it is often viewed as impersonal and driven by profit (2003). She studied 135 nurse practitioners across the United States that were participating in accredited FNP education programs. The respondents were primarily program directors. 98.5% of respondents reported having minimal CAM content in their curriculum. 80.3% said CAM education was integrated into existing courses. 69.8% reported their faculty used self study to gain CAM expertise. Only 18.3% of respondents reported employing CAM educated nurses who were certified in the subject. The study ultimately determined that a more relevant and useful definition of CAM is needed in nurse practitioner programs. Ultimately, the study found that there is a need for creative implementation strategies for adding CAM education to the current curriculum (Burnam, 2003). Few programs implement CAM into the core competency courses such as research, theory, policy and advanced assessment courses.

Conventional Western physicians and nurse practitioners agree that more education on CAM is needed in general. A starting point with any program seeking to increase educational content of CAM would be to consider creating a platform that endorses integrated and holistic health concepts. The following is a general description of many of the most commonly used CAM

therapies in America and their potential to beneficially serve as adjunct therapies where the need exists.

Naturopathic medicine

According to the American Association of Naturopathic Physicians, a naturopathic medical doctor attends four years at an accredited naturopathic medical school (Johnson, 2015). They undergo extensive training in the clinical sciences and complete a minimum number of hours in supervised patient care. They complete 4700 hours of training which is comparable to conventional medical school. Naturopaths may use homeopathy as one of many holistic therapies. The United States has 22 homeopathic medical schools, 100 homeopathic hospitals, 1000 homeopathic pharmacies and 15,000 homeopathic practitioners (Johnson, 2015). By the 1930s homeopathic medicine was deleted from mainstream medical schools.

Homeopathy

Homeopathy is a diverse healthcare system that is designed after three basic principles.

1) A substance when used in large doses which causes symptoms in a healthy person can be used to treat symptoms in an ill person 2) The minimal dose of a substance should be used to prevent toxicity 3) Only a single dose or remedy should be used in a patient at any one time

Homeopaths of modern times believe that natural remedies stimulate the body's own healing abilities and remedies are designed on an individual basis (Gerber, 2001; Heinrich, 2012).

Homeopathic remedies are extremely diluted extracts and modern homeopaths prescribe multiple remedies. The more diluted a remedy is, the more potent it is (Gerber, 2001; Heinrich, 2012).

Homeopathy attempts to match a correct single remedy with the totality of a patient to include physical, mental and emotional symptoms. If the correct homeopathic remedy is given the body will respond (Johnson, 2015). If the wrong remedy is given, nothing will happen because the remedies are so dilute. With that said, homeopathy could be the first truly holistic approach to

medicine (Gerber, 2001). Other types of material used in homeopathic remedies include animal, insect, biological, drug/chemical, and minerals (Heinrich, 2012).

Homeopathic treatment has been investigated in over 100 clinical trials. In a study comparing the representation of homeopathic clinical trials published in traditional science and CAM journals it was found that a publication bias against homeopathy exists in mainstream journals (Caulfield et al, 2005). It is noteworthy that a considerable difference exists between the number of positive trials that have been published about homeopathy in highly respected CAM journals compared and the lower number of negative trials published in mainstream journals.

In a randomized, double-blind study conducted in 2009 at a state medical school in Brazil found homeopathy to be comparable to Prozac (Fluoxetine) in treating moderate to severe depression (Johnson, 2015). Another study from Harvard University School of Medicine found in 1999 that homeopathy can be effective in treating mild traumatic brain injury (Johnson, 2015). A study in the *Evidence-Based Complementary and Alternative Medicine* was published in 2007 reporting that a specific homeopathic remedy was comparable to Ativan (Lorazepam) for treatment of insomnia, anxiety disorders and restlessness (Johnson, 2015).

Acupuncture

Acupuncture is the most commonly used Traditional Chinese Medicine (TCM) therapy. Acupuncture points have unique electrical characteristics that distinguish them from the surrounding skin (Ezzo et al., 2007). Dr. Hiroshi Motoyama, a researcher in Japan, developed a machine called the Apparatus for Measuring the Functions of the Meridians and Corresponding Internal Organs (AMI) that measures the acupuncture meridians to measure physiological imbalances. 28 electrodes are attached to the acupuncture meridians and electrical impulses are sent to a computer for interpretation. The Bob Hope Parkinson Research Institute in Florida has been using the AMI Machine to study the physiological and energetic imbalances in individuals with Parkinson's disease, a neurological disorder that affects motor coordination (Gerber, 2001).

Because of the success from the AMI Machine, the acupuncture meridians are now being measured for diagnostic as well as therapeutic reasons. In two studies on electroacupuncture benefits were experienced by patients with nausea caused by chemotherapy and in pregnant women (Ezzo et al., 2007; Helmreich et al., 2006).

Chinese acupuncture theory purports that chi energy flows through organs according to a daily clock like pattern (Gerber, 2001). The newly developing field of Western medicine, Chronobiology, explores the nature of human inner biological rhythms and their effect on health. This internal clock governs many bodily functions as well as enzymatic activity and has an effect on drug toxicity. Clinical tests have shown that drug therapy as well as acupuncture treatments can be maximized during certain hours of the day (Gerber, 2001). It has been proposed that these inner biological clocks are reflections of higher frequency subtle energetic rhythms which are in synch with the cosmic cycles of the universe (Chen et al, 2007). The acupuncture meridian system may be the link by which we are attuned to the energies of the celestial bodies (Gerber, 2001). Auricular acupuncture (AA) treatments for insomnia demonstrated efficacy in clinical trials (Chen et al, 2007). The rate of recovery using AA treatments was significantly higher than diazepam (Chen et al., 2007).

A major concept in Traditional Chinese Medicine is the idea of polarity which is expressed through yin and yang (Gerber, 2001). Yang is the male element associated with sun, light and the creative principle of life. Yin is the female element which is more passive and is associated with the moon and darkness. The two forces complement each other and balance is achieved with the two forces working together. The subtle energies referred to as chi are difficult to measure but there have been methods of proving the existence of an electromagnetic energy circuit involving the meridians and acupuncture points (Gerber, 2001; Chen et al., 2007).

Tai chi and Qigong

Other therapies in TCM are Tai chi ch'uan and Qi gong. Tai chi is a Chinese martial art practiced for self defense and health benefits. Tai chi has been recommended to older people for physical and psychological benefits. Qigong is rooted in Chinese medicine and is concerned with coordinated movement, breath and awareness used for health, meditation and martial arts training. Many professionals consider Tai chi to be a type of Qigong. The two disciplines are separate but closely related practices and help with balance, coordination, deep breathing, and meditation.

Yoga

Traditional Indian medicine encompasses the more commonly known Ayurvedic medical approaches. Ayurveda is a traditional healing system dating back several thousand years as part of the Indian Vedic sciences. The Vedic sciences consist of yoga, meditation, astrology, and Ayurveda. Ayurveda literally means the science of life. It is a system of healing that uses herbs and natural means. Ayurveda concentrates on herbal remedies, correct diet and correct way of living. It is a practice most common in India, Sri Lanka, Tibet, Burma and China but many in the United States practice the discipline today with over 500 Ayurvedic practitioners making up the National Ayurvedic Medical Association (NAMA) ("Brief", 2015).

According to Ayurveda there are three basic life forces, energy, light energy and cohesive force. These life forces relate to the humors air, fire and water which govern growth and decay of the human body. When the three humors go out of balance, disease appears in the physical body. Yoga is among the chief activities that aids in restoring balance to these humors.

Yoga is among the most common Traditional Indian Medicine therapies. Indian yogic literature speaks of special energy centers existing within our subtle bodies. These energy centers are called chakras and resemble whirling vortices of subtle energy. (Kasiganesan et al, 2004). These chakras take in higher energy and transmute it to a useable form within the human body. Subtle- energy technologies are being developed in order to measure the existence and

function of the chakras. There are seven major chakras associated with the physical body. Each major chakra is associated with a major nerve plexus and associated endocrine gland. Each of the major chakras is also associated with a particular type of psychic perceptual function. The chakras translate energy of a higher dimensional nature into an endocrine output which affects the entire body (Gerber, 2001). The chakras are connected to each other by fine subtle-energetic channels called nadis which can be likened to a network of nerves throughout the body.

Alignment between the chakras, glands, and nerve plexuses is necessary for optimal human functioning. Decreased flow of subtle energy through any of the chakras can lead to hypoactivity of a key endocrine gland, the pineal gland (Gerber, 2001).

Research by Dr. Hiroshi Motoyama of Japan has confirmed the presence of the chakra system in human beings (Gerber, 2001). Itzhak Bentov, a researcher who investigated physiological changes that take place during meditation, was able to confirm the findings of Motoyama regarding electrostatic energy emission (Gerber, 2001). Regular practice of yogic exercise has shown profound improvement in cardiovascular processes, psychological performance, thermogenesis, and alleviating stress induced disorders (Kasiganesan et al, 2004). It is believed that yoga mediates an interaction between the autonomic nervous system and the endocrine system and causes the release of melatonin which leads to feelings of well-being (Kasiganesan et al, 2004). During a study of yoga led by Kasiganesan et al 2004, significant reduction in systolic, diastolic, and mean arterial pressure confirmed a reduction in sympathetic activity. These results were likely brought on by the conditioning effects of yoga on autonomic functions which were mediated through the limbic system and higher areas of the central nervous system (Kasiganesan et al, 2004). Meditation causes an increase in cerebral perfusion besides decreasing vascular resistance and blood levels of catecholamines, cortisol and lactate (Kasiganesan et al, 2004). In doing yoga, one slows metabolic functions. It is believed that yoga

causes increased secretion of melatonin which is caused by increased secretion of hormone by the pineal gland.

Flower Essences

Flower Essences are CAM medicines which are designed to affect the physical body, aligning the subtle chakras and psychological states (Gerber, 2001; Heinrich, 2012). Flower essences contain miniscule amounts of plant matter much like homeopathy. Dr. Edward Bach is credited with discovering flower essences and was an orthodox physician in London where he found an appreciation for homeopathic medicine.

Bach believed that illness was a direct result of disharmony between the physical personality and the soul. The mental and energetic disharmony of the soul outweighed any disease process. He proposed that the subtle vibrational energies in flower essences were able to realign emotional patterns of disease and dysfunction. In essence if you correct emotional imbalances, the immune system is strengthened to conquer the physical disease. Bach took into account the relationship of the higher mind to the magnetic qualities of the higher subtle bodies. Bach was known for his extreme sensitivity to the flower essence cures he developed that it was said when he put a flower to his lips, he experienced all of the symptoms and emotional states to which the flower's essence was a remedy (Gerber, 2001).

He developed a method to create the flower essences without having to pulverize the plant and potentize the solution as done in homeopathy. In all, he developed 38 flower essence remedies by placing the flowers on the surface of a bowl of spring water for several hours in the sun to obtain efficacious vibrational water extracts. He believed in the subtle energetic qualities of sunlight in much the same manner that Hindu's refer to it as prana. Flower essences have very little impact on the physical body. They are used to treat the emotional disturbances which lead to cellular necrosis.

In *Flower Essences and Vibrational Healing*, Gurudas explains some of the essences that can heal the physical body are also effective in treatment for the immune system, memory enhancement, and neuron stimulation in stroke victims. Allopathic doctors have few treatments for people who suffer with brain disorders. There are many flower essences which aid in neurological development and rebalancing at the cellular level along with subtle energies (Gerber, 2001; Cram, 2001).

When a flower essence enters the body it follows a specific pathway from the bloodstream to the circulatory and nervous systems. The polarity of these systems creates an electromagnetic current. This electromagnetic force resonates between the life-force and the consciousness. The life-force works mainly through the blood and consciousness works mainly through the brain and nervous system. These two systems have quartz like properties as well as electromagnetic properties. From the circulatory and nervous system, the remedy moves to the meridians and from the meridians the remedy's life force moves through the chakras returning to the cellular level and the areas of the body experiencing imbalances. The path is determined by the type of remedy and the person's disposition. The crystalline properties of the physical body such as cell salts, fatty tissues, lymphs, red and white blood cells, and the pineal gland assist in distributing the subtle energies of homeopathic remedies and flower essences to their appropriate paths of therapeutic action.

The white flowers from the Yerba mate tree indigenous to Paraguay and Brazil increases tissue regeneration of brain tissue (Gerber, 2001). Mugwort is known to reintegrate synapses and enhance communication between neurons in the brain (Gerber, 2001). Macartney Rose, native to China, can be used to alter the electrical charge carried by neurons (Gerber, 2001). Flower essences may be useful in psychic development. Twelve patients from four clinics around the United States were treated with Bach flower essences to test the efficacy for treatment of major depression (Cram, 2001). The findings suggest that Bach flower remedies can be used

as an adequate adjunct therapy to treat depression (Cram, 2001). With this knowledge, we are able to deduce that we may be able to successfully use flower essences to treat the depressive symptoms commonly associated with PTSD as well.

Aromatherapy

Aromatic plants and their extracts have been used in medicine and the perfume industry across the globe for thousands of years (Heinrich, 2012). Rene-Maurice Gatefosse, a French perfumer first used the term aromatherapy in 1928 when he burned his hand in a laboratory and discovered that lavender oil helped it to heal quickly. Aromatherapy is the therapeutic use of essential oils. Essential oils are obtained from plant material usually through the process of distillation. Aromatherapists use essential oils to treat physical illness, disease and emotional disturbances. Aromatherapy is often used as a treatment for relieving stress and tension. The most common method of application of essential oils is by massage where two to three drops of oil are diluted in a carrier oil such as grapeseed, or jojoba oil. Other methods of application include addition to baths, inhalation, compresses, and use in burners or vaporizers. Essential oils should never be taken internally without medical supervision.

In a double-blind, placebo controlled study to evaluate the efficacy of aromatherapy in treatment of patients with behavioral and psychological symptoms in dementia, results showed a 35% improvement in agitation (Ballard, 2002). The treatment effect of the essential oils may have been mediated by the constituent essential oil terpenes. The study noted that monoterpenes are the most common hydrocarbons in essential oils and one of those present in Melissa citronellal was concentrated in the hippocampus after administration in an experiment with animals (Ballard, 2002).

Essential oils are used psychotherapeutically, esthetically, holistically, and in a nursing and medical environment. The comforting smells have clinically shown to encourage the release of endorphins and noradrenalin in the brain which can lead to feelings of well being and pleasure.

That said, aromatherapy would be a scientifically viable treatment support to any cognitive behavior therapy that is often associated with PTSD treatment regimens.

Herbalism

Today, medical herbalists use current knowledge of illness and disease using many of the same diagnostic tools as conventional doctors. Herbalists rely heavily on randomized controlled clinical trials which prove the efficacy of the herbs they use in their remedies. Herbalists select herbs on an individual basis for their clients. Herbalists seek to identify the underlying causes of illness and take this into account when designing a treatment plan. Herbs are used to stimulate the body's healing system, strengthen bodily systems and correct disturbed body functions (Heinrich, 2012).

Herbalism is not the same as phytotherapy. Phytotherapy uses more standardized herbal preparations and extracts. Phytotherapeutic preparations have undergone significant clinical trials whereas herbalist preparations are less standardized and executing clinical trials would be near impossible. Herbalism uses combinations of herbs in concentrated doses instead of diluting them as seen in homeopathy. Individuals with an interest in science-based phytotherapy are often not considered to be part of CAM (Heinrich, 2012).

The following are brief discussions on several CAM therapies that are generally associated with culture and religion.

Jamu

Jamu is traditional Indonesian medicine practiced mainly in Java. Jamu is supported by the Program of National Health in Indonesia. It consists of herbal remedies that often include honey, milk and goat's bile. The word jamu means traditional medicine. Jamu is heavily influenced by Ayurveda from India. Jamu cures often come in the form of powder, pills, capsules and liquid. Jamu adherents believe that God has created a cure in nature for every disease. Each Javanese

family has their own herbal garden. Jamu prescriptions are produced to fight illness and disease, personal beauty products, and to build endurance and general health protection.

Kampo

Japanese medicine, Kampo, was developed beginning in the 5th and 6th centuries and was introduced into Japan by China. The Japanese adapted Kampo throughout the years to what it is today. For the last 100 years conventional Western medicine has been the main form of medicine in Japan but doctors still practice Kampo frequently. 73% of medical doctors in Japan practice Kampo (Watanabe, 2001). 94% of these doctors believe in the effectiveness of Kampo (Watanabi, 2001). Kampo is primarily concerned with the study of herbs.

In 1967 the Ministry of Health, Labor and Welfare approved four Kampo medicines for reimbursement under the National Health Insurance program. The 14th edition of the Japanese Pharmacopeia lists 165 herbal ingredients used in Kampo remedies. In the United States, Kampo is practiced mainly by acupuncturists, Chinese medicine practitioners and naturopathic doctors. Kampo herbal remedies have been studied in clinical trials by the New York Memorial Sloan-Kettering Cancer Center. Japan regulates herbal remedies like pharmaceuticals are regulated. The term Kampo means Chinese style medicine.

Unani-Tibbi Islam

Unani-Tibbi Islam medicine is also known as prophetic medicine. This unique form of Arabic or Islamic medicine consists of herbal remedies, diet, manipulative therapies and surgery. The term literally means Greek medicine because early Arabic physicians deemed much of their knowledge from the Greeks such as Hippocrates and Galen (“Unani-tibbi”, 2015). Unani is practiced in the Middle East and India. India has 40 Unani schools.

As with the Greek humoral theory, unani-tibbi is a completely holistic system. The four bodily humors recognized are Dum (blood), Bulghum (phlegm), Sufra (yellow bile), and Sauda

(black bile). Each humor retains certain characteristics as being hot and moist (blood), cold and moist (phlegm), hot and dry (yellow bile), and cold and dry (black bile). Each person has a constitution based on their humors.

Each patient has a unique profile of humors that must be in harmony to maintain health. If the humors become imbalanced, a unani-tibbi physician can restore balance through herbal remedies, cupping, bleeding, massage and bodily manipulation. Each patient is given herbs to match their humor type. The herbs are mixed with honey and other bee products. The herbal remedies of Unani Tibbi are appreciated for their non-toxicity and absence of side effects.

Native American Medicine

Native American (NA) traditional healing is identified by the NCCIH as a whole medical system encompassing many holistic treatments used by indigenous healers from varying tribes for a multitude of acute and chronic conditions or to promote health and wellbeing (Koithan & Farrell, 2010). CAM therapies in Native American Medicine include prayer, music, ritual purification, herbalism, massage, and other ceremonies as deemed necessary by the spiritual healer. Native American healers rely heavily on intuition and spirituality in their assessment and treatment of patients. Patients frequently seek advice from healers who are herbalists, spiritual healers and medicine men. A recent survey determined that sweat lodge ceremonies, spiritual healing and herbal remedies are the most used methods of treatment. Marbella et al. (1998) conducted a study on the use of Native American healers at an Indian medical clinic in Milwaukee. The study found that 38% patients use a spiritual healer and only 14.8% tell their conventional primary care physician. Patients rate their healer's advice above their primary care physician's advice 61.4% of the time.

Case taking

All CAM therapies have use in treating physical as well as psychosomatic disorders and issues of the spirit. It is up to the practitioner to discern the most appropriate therapy for his client when the situation arises. Case taking, in many cases, facilitates physicians in diagnosing the underlying causes of illness and disease and therefore, recommending a holistic course of action for rectifying abnormalities that may exist in the physical and emotional condition.

Case taking is a method used by homeopathic physicians to get to know the patients and the reasons behind them coming to visit them. The purposes behind case taking include:

- To find out more about the disease
- To find out the true dynamics of the patient
- To determine all of the symptoms that are presenting in order to select the most appropriate remedy
- To learn the root causes of the disease and symptoms

The sources of information in case taking include the patient, bystanders and the physicians own observations. The physician observes, listens, interrogates, clinically examines, investigates and provides a diagnosis for whatever is occurring with the patient. The case taking questionnaire is designed to find out what health issues have been present in the patient's family history (See Appendix A).

Some conditions like high blood pressure and heart disease run in families but are probably resultant from individual changes in genetics that when taken collectively, lead to disease states. Knowing as many details as possible about a patient's family health history is extremely important because many times a sudden death can be mislabeled as a heart attack, drowning or car accident when there was actually an underlying heart condition to blame. In the cases of autosomal dominant disorder, family members of the person with the gene disorder have a 50%

chance of inheriting the gene mutation that causes the family's condition. Immediate family members of all people who have had high risk inherited disorders should be screened for further evaluation.

Summary, Conclusion, Limitations, Recommendations

Summary

This was a qualitative literature review and analysis on CAM use by Americans and physicians treating these Americans in modern times. An attempt was made to identify all surveys that documented statistical associations between CAM use and demographic and/or mental health factors, spiritual factors, and physician knowledge of CAM. In all, twenty-five studies were evaluated for this report purposes. This study found that one third of United States adults use some form of CAM therapy with non vitamin, non mineral natural products showing the most common use. Proclivity for use of CAM is influenced strongly by ethnicity, gender, education, and wealth. Healthcare providers are likely to be unaware when their patient is using CAM as adjunct therapies mainly due to lack of transparency between a physician and their patient when it comes to CAM use. This is more than likely due to the provider's lack of education in CAM therapies and a low level of confidence in discussing such therapies.

Conclusion

Finally, there are many efficacious CAM therapies that aid in healing emotional disturbances. Psychosomatic disorder and stress leads to illness and disease and is prevalent in our society especially within certain cultural groups. In the United States, the demand for CAM intervention to correct these disturbances is present. Conventional Western physicians and healthcare providers have a moral obligation to the clients they serve to offer the most comprehensive level of healthcare possible by being able to include CAM therapies in treatment plans when a client requests such based on personal preference whether they be cultural or religious considerations .

Healthcare providers are currently not well educated in CAM and should become better educated in multiple CAM modalities in order to better facilitate the broad and diverse needs of their clients. Many CAM modalities are designed to treat emotional disorders and disturbances of the human psyche as demonstrated through numerous clinical trials. Some of the most popular therapies including deep breathing exercise, massage, acupuncture, aromatherapy and yoga would be optimal adjunct therapies for patients suffering with emotional blockages.

Limitations

The data used representing national usage of CAM therapies is based on a national survey conducted by one organization, National Institutes of Health. Independent surveys may be conducted in different manners rendering different results. The studies regarding the physicians and nurse practitioners were based on small sample sizes within a select geographical location and may not reflect the attitudes and opinions of physicians in all parts of the country.

Recommendations

Physicians and treatment providers should become more familiar with those CAM therapies that are trending in modern reports. By becoming familiar with cultural considerations which may affect the treatment selections and needs of patients, physicians are better equipped to prescribe a more holistic health treatment plan. Establishing a CAM information database on site that houses information and articles on various CAM treatments is an ideal method for healthcare providers to ensure that their practice and staff stays up-to-date on current information in the CAM healthcare industry. Requiring physicians and staff to have continuing education regarding CAM therapies especially those that are associated with religious or cultural use is an ideal way to stay educated on CAM therapies. Interviewing the patient, using a comprehensive case taking questionnaire in order to better understand the specific needs of the patients is an ideal method of assessing the exact needs of each and every client on an individual basis.

Regarding industry reliability, ongoing clinical trials are necessary for many CAM therapies to prove efficacy in order to gain acceptance in the Western medical community.

Standardization and auditing of the herbal products industry by the FDA is pertinent to the continued success of the natural healthcare industry. The FDA should increase its activity with respect to CAM, biomedical research, health services research, and other healthcare related issues and make these activities as well as technical assistance known to CAM and conventional researchers and practitioners.

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Appendix A

Case Taking Questionnaire

Date: _____

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Daytime Phone: _____ Evening Phone: _____

Social Security #: _____ Driver's License #: _____

Date of Birth: _____ Gender: Male Female

Marital Status: Single Married Ethnicity: _____

Name of spouse/Significant other: _____

Children's Names and Ages: _____

Referred By: Name: _____

Yellow Pages Ad Sign Other: _____

Occupation: _____

Employer: _____

Employer's Address: _____ Phone: _____

Primary Health Care Provider: _____

Address: _____

Phone #: _____

Permission to Consult with Primary Provider? No Yes (Please Initial)

In Case of Emergency Please Notify:

Name: _____ Phone #: _____

Relationship: _____

Primary Health Concern:

Prescription, OTC medications, Alternative therapies:

Family History of: (Circle if you have the following on your mother's side or father's side)

Heart disease	Stroke	Diabetes	Cancer	Depression	HBP
M F	M F	M F	M F	M F	M F