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# Attitudes Toward Complementary and Alternative Medicine

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ATTITUDES TOWARD COMPLEMENTARY AND ALTERNATIVE MEDICINE

A thesis submitted to  
the Graduate College of  
Marshall University  
In partial fulfillment of  
The requirements for the degree of  
Master of Arts in Psychology

By

Miranda Lea Cobb

Approved by

Dr. Penny Koontz, Committee Chairperson

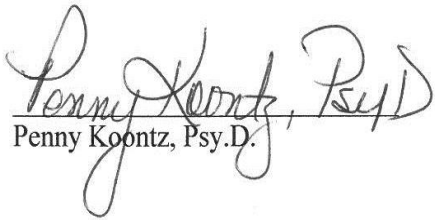
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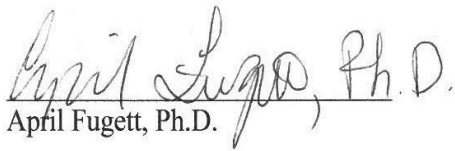
APPROVAL OF THESIS

We, the faculty supervising the work of Miranda Lea Cobb, affirm that the thesis, *Attitudes Toward Complementary and Alternative Medicine*, meets the high academic standards for original scholarship and creative work established by the Psychology Department and the College of Liberal Arts. This work also conforms to the editorial standards of our discipline and the Graduate College of Marshall University. With our signatures, we approve the manuscript for publication.

  
Penny Koontz, Psy.D.

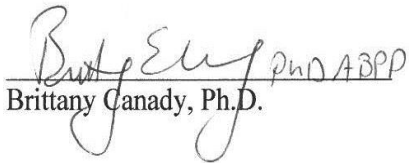
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## **ABSTRACT**

Complementary and alternative medicine (CAM) usage has increased throughout the years, as many people are becoming interested in using less conventional interventions for common illnesses. As a whole, CAM encompasses any practice used to treat an illness or disorder that does not fall under the category of traditional medicine. CAM interventions not only treat the physical aspects of health, but as clinicians are beginning to realize, these interventions may also be effective in treating psychological problems, most notably anxiety and depression. This research focused on attitudes toward CAM for psychological disorders. I examined participants' attitudes about the use of CAM in relation to psychological symptoms. I hypothesized that younger participants will have more positive attitudes toward CAM than will older participants. I also aimed to determine if differences emerge based on other demographic variables, such as gender or personal experience with CAM. I hypothesized that women and participants with more experience with CAM will also hold more positive attitudes. I developed a Likert scale survey with 20 statements for participants to rate from 1 (I strongly disagree with the statement) to 5 (I strongly agree with the statement). These questions focused on determining the participants' attitudes toward the use of CAM for mental health treatment. In addition, participants were asked to provide their age, gender, and degree of experience with CAM. I found that females held more positive attitudes than males, older participants held more positive attitudes than did younger participants, and past usage had no effect on attitudes.

## **CHAPTER 1**

### **INTRODUCTION**

Generally, Complementary and Alternative Medicine (CAM) focuses on preventative healthcare measures for a patient, taking into consideration the patient's mind, body, emotions, and environment (Sikand & Laken, 1998). There has been a steady increase in the usage of CAM throughout the years, especially in the United States (Kessler et al., 2001a). Patients sometimes turn to CAM when traditional medicine is not improving their symptoms and when people want to feel more in control of their own health (McFadden, Hernández, & Ito, 2010). Patients who believe their health is a result of their own personal behavior, rather than purely biological factors, are more likely to use CAM, as are those who have a philosophical congruence with the ideas behind CAM (McFadden et al., 2010).

## **CHAPTER 2**

### **REVIEW OF THE LITERATURE**

#### **Complementary and Alternative Medicine**

CAM has been around since the 1700s, when people were trying to escape the harsh treatments of the time (ex. bleeding, purging, blistering the skin) and they wanted to use nature as a healing agent (Whorton, 2006). During this time, physicians, as well as patients, wanted to turn toward focusing on the factors underlying illness, rather than focusing solely on curing the person, a notion that coincides with today's view of CAM (Whorton, 2006).

Homeopathy, created in the 1700s by a German physician, was the first CAM to gain popularity in the United States. During the 1830s, around the same time that botanical remedies and hypnosis made their appearance, homeopathy began to become more prevalent in the United States (Whorton, 2006). Chiropractic and naturopathy were the next to make their way into the



United States, followed by spiritual healing (Whorton, 2006). In the 1970s, when CAM was gaining its popularity, physicians began using acupuncture. This popularity led to research of other Chinese medicines, (eventually Chinese herbal medicine), and Ayurveda, along with other Asian healing therapies, became popular in the United States (Whorton, 2006). In 1992, the National Institute of Health created the Office of Alternative Medicine (OAM), which focused primarily on the safety and effectiveness of CAM treatments (Milden & Stokols, 2004). Eventually, the OAM became the National Center for Complementary and Alternative Medicine (NCCAM), which has the same goal as the OAM, except that it also provides authoritative information to practitioners and the public to train researchers (Milden & Stokols, 2004).

CAM can be described, very generally, as any treatment that is not considered a part of conventional medicine. These treatments are uncommon when compared to conventional treatments, but they are used for the same common illnesses that orthodox medicine aims to treat. Complementary medicine is used in conjunction with conventional interventions, whereas alternative medicine is used in place of conventional interventions (Harris, Kingston, Rodriguez, & Choudary, 2006). Some examples of commonly used CAM include acupuncture, hypnosis, yoga, meditation, biofeedback, prayer, massage therapy, chiropractic care, dietary supplements, and natural products. In contrast to conventional medicine and general medical practitioners, complementary medicine and alternative practitioners are highly focused on preventing disease rather than curing it after it occurs (Furnham & Forey, 1994). Alternative practitioners use more natural products and have more self-aware lifestyles, meaning they believe and accept that everything they do influences their health and they take preventative measures to stay healthy (Furnham & Forey, 1994).

Furnham (2002) states that CAM differs from conventional medicine in five ways: health, disease, diagnosis, therapy, and role of the patient. In conventional medicine, health is defined as the absence of disease, but CAM defines health as a balance of positive and negative forces. Conventional medicine focuses more on destroying the forces making people ill, whereas CAM treatments aim to strengthen the positive, healthy forces that aid in preventing illness in the first place. Also, in conventional medicine, the patient is viewed as a passive recipient of the treatment, but CAM treatments allow the patient to more actively participate in regaining his or her health (Furnham, 2002).

The number of people who use CAM has increased steadily throughout the years. According to Sikand and Laken (1998), one third of all Americans have used some form of CAM, and the majority of those users were well educated and wealthy. Additionally, 28% of people who saw a medical doctor for an illness also used some type of unconventional therapy. Kessler et al. (2001a) conducted a telephone survey, asking participants their age, whether they had used various types of CAM, and when they had used them. The researchers found that until the 1970s, many CAM treatments were not routinely used. This study found that 17 of the 20 CAM treatments they asked about showed an increase from the 1960s to the 1970s. The researchers hypothesize that the increase could be due to the “hippie” subculture that peaked in the 1970s (Kessler et al., 2001a). The people in this subculture steered away from conventional treatments and turned to more natural, preventative treatment options. The study also found that at the time the survey was conducted (1997-1998), 67.6% of all the participants had tried at least one CAM treatment (Kessler et al., 2001a).

From 1990-1997, CAM usage in the general population increased from an estimated 34% to an estimated 42% in the United States, and there was an increase in all the countries studied

from 1990-2006 (Frass et al., 2012). Herbal medicine usage increased from 3% in 1990 to 12% in 1997, and high dose vitamin usage increased from 2.4% to 5.5% (Fugh-Berman & Cott, 1999). There was an increase in mind-body practices (yoga, meditation, deep breathing), as well as acupuncture and massage therapy from 2002 to 2007 (Barnes, Bloom, & Nahin, 2008).

According to Furlow, Patel, Sen, and Liu (2008), one of the largest groups of people who use CAM is reproductive aged, educated, employed women. However, the number of older adults who use CAM (41%) is surprisingly substantial, as well (Astin, Pelletier, Marie, & Haskell, 2000). Senior adults use herbal medicine, chiropractic, massage, and acupuncture more frequently than any other CAM treatments, and they use them to primarily treat back problems, chronic pain, and arthritis (Astin et al., 2000). Caucasian senior adults use CAM more frequently than any other ethnicity (Ness, Cirillo, Weir, Nisly, & Wallace, 2005).

In a study conducted with graduate students, it was found that the primary reasons for using CAM were that illnesses were not responding to traditional medical treatment and that the students believed they were more in control of their own health when using CAM, as opposed to conventional treatments (McFadden et al., 2010). The researchers also found that the students were more likely to use CAM if they believed that health was the result of personal behavior (McFadden et al., 2010).

### **CAM “Prescription”**

There are many disorders where a form of CAM is “prescribed” to a patient by medical professionals; however, these treatments are used as a complementary medicine, rather than an alternative one. This is not to say that the treatments are used as a last resort; they are being prescribed as a first line treatment in conjunction with conventional treatments. Many patients with anxiety disorders are prescribed meditation in the treatment regimen (Kessler et al., 2001b).

There is insufficient empirical support for medical professionals to prescribe only meditation, but they prescribe it in conjunction with other medications. Depression is another condition for which medical professionals are beginning to prescribe complementary treatments, along with traditional medicine. In addition to conventional medicines, meditation, St. John's wort, and exercise have been used to treat the symptoms of depression (Shelton et al., 2001).

Many patients with multiple sclerosis utilize CAM because there is not a wide array of conventional options to treat their symptoms. Multiple sclerosis patients may change their diets, or take omega-3 fatty acids and antioxidants (Yadav, Shinto, & Bourdette, 2010). The most common CAM for insomnia or difficulty sleeping is melatonin, which is a naturally occurring hormone that patients take as a supplement. Some parents with children who are diagnosed with autism spectrum disorders utilize CAM with their children, with some patients showing improvements with a dietary change or with taking vitamins and minerals to supplement their diet (Elder, 2008). Physicians inform parents about these treatment options because there are not many conventional options for autism spectrum disorders.

### **Traditional Uses**

The top three CAM practices in 2012 (the most recent data from NCCIH) were natural products, deep breathing, and yoga (National Center for Complementary and Integrative Health, 2016). Each has its own conventional uses.

**Natural Products.** Natural products include vitamins, minerals, and herbal medicines. Individuals take vitamins to ensure they are getting their recommended daily values of each vitamin. Physicians sometimes suggest that patients take vitamins if their bodies are not producing sufficient levels of the vitamins or if they are not getting enough in their diet. The same is true for minerals. Vitamins A, C, D, E, and K are some of the most important vitamins

for the body, and those are the most common ones that individuals take as supplements to ensure their bodies are getting the recommended amounts (National Center for Complementary and Integrative Health [NCCIH], 2015). Calcium, potassium, iron, and magnesium are some of the more common minerals that people take if their diet alone is not enough to supply them with the recommended daily amount (NCCIH, 2015). Herbal medicines/products include a variety of different items. Green tea is used primarily as a beverage; people drink it for the taste, but also for the health benefits. Acai berries are used to flavor juices, teas, and foods and they also have antioxidants that are important for the body. Ginseng is another herbal product that people take to strengthen the immune system. Ginkgo is used to increase blood flow in the body, to help increase memory in patients with Alzheimer's disorder, and to enhance other aspects of health, as well (National Center for Complementary and Integrative Health, 2005).

**Deep Breathing.** There are several reasons that individuals use deep breathing, with the most obvious being to rid the blood of carbon dioxide, as taking deeper breaths allows more oxygen into the respiratory system. Shallow breathing will suffice at keeping a person alive, but taking deep, meaningful breaths allows one to rid his or her body of more carbon dioxide, allowing the person to feel less lethargic. Deep Breathing is also used as a pain management technique. There are several studies that show the positive effects deep breathing can have for people with chronic pain. Patients with chronic back pain (Wahbeh, Elsas, & Oken 2008), and people who have just had surgery (Westerdahl et al., 2005) can benefit from deep breathing.

**Yoga.** Yoga has been practiced for centuries in the eastern world for religious reasons. The basis of yoga is to connect the mind and body to create a sense of mental and physical wellbeing (Khalsa, 2007). Yoga has made its way to the west, and now individuals across the United States practice yoga. A typical yoga practice involves pranayama (breathing exercises),

asanas (physical poses), and dhyana (meditation). In the western world, yoga is used more as a form of physical exercise. People go to yoga class for a workout or to improve flexibility (Posadzki, Ernst, Terry, & Lee, 2011). There are different forms of yoga - some traditional, some more modern, but generally they are all used for these same reasons.

### **Nontraditional Uses**

Natural products, deep breathing, and yoga have traditional uses in the United States; however, healthcare professionals and patients are beginning to realize the psychological benefits of these treatments, as well as the physical benefits. These three types of CAM are now being more commonly used to improve the symptoms of psychological disorders, most notably anxiety and depression (Brown & Gerbarg, 2005; Büssing, Michalsen, Khalsa, Telles, & Sherman, 2012; Fugh-Berman & Cott, 1999; Gaster & Holroyd, 2000; Jerath, Edry, Barnes, & Jerath, 2006; Kessler et al., 2001b; Khalsa, 2007).

**Natural Products.** Patients use natural products to improve the symptoms of anxiety and depression for different reasons. Antidepressant medications can be too expensive for some people, especially if insurance does not cover the cost. As a result, some people turn to vitamins, minerals, and other natural products that are significantly less expensive. St. John's wort is used to treat symptoms in some cases of depression. The plant has properties that can improve the symptoms of depression with very few side effects, which makes it more appealing than typical antidepressants for some people (Gaster & Holroyd, 2000). One study found that, in four different trials, participants taking St. John's wort for depression showed significant improvement in symptoms when compared to participants in a placebo group (Gaster & Holroyd, 2000). Another study examining St. John's wort's efficacy found a significant improvement when compared with the placebo group, but not when compared with a tricyclic antidepressant

group (Fugh-Berman & Cott, 1999). This study still yields useful results, however, because only 19.8% of people reported mild side effects with St. John's wort, whereas 52.8% reported side effects with the tricyclic antidepressants (Fugh-Berman & Cott, 1999). These results are important, as often, patients will discontinue medications, rather than endure the side effects associated with conventional treatments.

According to Williams et al. (2005), depression is one of the top ten reasons people turn to CAM therapies. The researchers conducted a study to examine the efficacy of vitamin B-6 in helping with symptoms of depression. The results indicated, overall, no benefit in alleviating depressive symptoms; however, they did find that pre-menopausal women benefitted from the treatment. The women who experienced very mild depression as a part of their premenstrual symptoms saw a significant decrease in the depressive symptoms when taking vitamin B-6 (Williams et al., 2005). Another study examining the benefits of vitamin B aimed to determine whether vitamins B-6 and B-12 could assist in preventing the symptoms of depression in older adults. This study found that higher intakes of those two vitamins did decrease the risk of developing depressive symptoms over the person's lifetime (Skarupski et al., 2010).

Natural products are also used to treat anxiety, specifically the herbal supplement, kava (van der Watt, Laugharne, & Janca, 2008). The researchers divided participants with anxiety disorders into two groups: one given kava and one given a placebo. There was a significant reduction in anxiety symptoms in the kava group when compared with the placebo group after one week (Fugh-Berman & Cott, 1999).

**Deep Breathing.** Deep breathing has many positive effects on the central nervous system. It slows down the heart rate and decreases blood pressure, both of which help to calm the body and mind (Jerath et al., 2006). Deep breathing is utilized in meditation for this very

reason. Individuals with anxiety use this treatment to assist with calming when they are feeling anxious. Many patients use deep breathing to treat the symptoms of PTSD, depression, and substance abuse. One study showed that, when used in an anxiety-provoking situation, deep breathing significantly reduced physiological arousal (Brown & Gerbarg, 2005).

**Yoga.** Yoga has many psychophysiological benefits, including calming the mind and strengthening the body. These benefits help to diminish anxiety, distress, high blood pressure, and improve mood (Büssing et al, 2012). These benefits are produced because yoga practices reduce the activity of the sympathetic nervous system (fight or flight) and increase activity of the parasympathetic nervous system (rest and digest) (Brown & Gerbarg, 2005).

### **Attitudes Toward the Usage of CAM**

Studies have been conducted to determine what people think about CAM treatments, and there are mixed results. The attitudes toward CAM have been categorized into attitudes of medical personnel and of the general population.

**Medical Personnel.** In 1993, the American Medical Association published an article indicating that CAM treatments were ineffective (Sikand & Laken, 1998). Those findings, no doubt, had some effect on attitudes toward CAM at the time; however, since then, more studies have been completed that show these treatments can be effective for treating certain conditions. According to a study by Sikand and Laken (1998), a majority of physicians report they would refer their patients to try a CAM treatment. This study found that female pediatricians were more likely than male pediatricians to refer patients, female pediatricians had more positive attitudes about CAM, and they wanted to learn more about CAM (Sikand & Laken, 1998). Along with female pediatricians, female OB/GYN physicians were more likely than male OB/GYN physicians to believe CAM treatment options would be effective and were more likely



to refer their patients for these services (Furlow et al., 2008). Younger physicians were also more likely to have positive attitudes about CAM than were older physicians (Furlow et al., 2008).

In contrast, there are also studies that show fewer positive attitudes toward CAM. Sewitch, Cepoiu, Rigillo, and Sproule (2008) state that CAM is only perceived as moderately effective, and of the 89% of physicians that said they would consider recommending CAM, only about 14% actually did so. This study also showed that physicians held more negative attitudes toward CAM than nurses and other healthcare professionals and that, contrary to popular belief, rural psychologists and mental health counselors were more likely to suggest CAM than urban practitioners (Sewitch et al., 2008). A study conducted by Milden and Stokols (2004) showed fewer positive attitudes, as well. They found that 61% of physicians discouraged CAM treatments due to lack of personal knowledge about their use. However, 81% of the physicians in this study wanted more education about the different treatment options (Milden & Stokols, 2004).

Astin, Marie, Pelletier, Hansen, and Haskell (1998) describe the variability in results across a number of studies regarding mainstream physicians' attitudes toward CAM. In regards to physicians believing there is benefit in herbal medicine, the variability ranges from 23% to 52%. There is also variability with regard to the gender of the physician, which could be related to geographical differences. Berman, Singh, Hartnoll, Singh, and Reilly (1998) mention another unexpected finding—there is a high acceptance of acupuncture and chiropractic among primary care physicians, despite a low level of training in these practices for general practitioners.

The medical educational system is severely lacking in regards to CAM education. Many schools mention CAM and the different treatment options, but do not include details in the

curriculum about how to properly identify or how to implement the treatments (Harris et al., 2006). A study completed in Sierra Leone found that pharmacy students there have little to no knowledge about CAM (Harris et al., 2006). This lack of knowledge can hinder the pharmacists from providing important information to their patients about these options. Many physicians in the United States as well, want more education on CAM, as many of their patients use at least one form of it (Harris et al., 2006). Knowing about the different options can help the physicians and patients identify the best options, making it easier to make a well-informed decision about treatment. In the study from Sierra Leone, there was no difference found in attitudes based on gender of the pharmacist, which is unlike studies conducted in the United States (Harris et al., 2006). There was an overall positive attitude toward CAM among pharmacy faculty and students (Harris et al., 2006). There needs to be a consensus for a core curriculum for medical education and, according to Berman (2001), the importance of mind, body, and spirit integration should be reevaluated for overall medical education.

**General Population/Patients.** One study shows that the attitude of the general population toward CAM is generally positive (Frass et al., 2012). The fact that CAM treatments are not normally paid for by insurance and that there is still so much money spent on them every year lends support to the presence of positive attitudes (Frass et al., 2012). It would appear that for many people, the benefits outweigh the costs. Furlow et al. (2008), found that OB/GYN physicians had more positive attitudes toward CAM than did the patients. This is not to say that the patients had negative attitudes, but the physicians are often more informed than the patients about these unconventional treatment options. The general population is even less informed about CAM. This may lead to potential problems because patients may not feel comfortable telling their doctor they are using CAM, which could possibly change how the doctor chooses to

treat the patient. One study found that 21% of people surveyed believed that using alternative medications was better than using conventional medications (McFadden et al., 2010). Although this number is still relatively low, the 79% of people who believed using a combination of alternative and conventional medicines is significant (McFadden et al., 2010).

Following a review of this information about CAM and peoples' attitudes toward CAM, the following hypotheses were formulated. The primary purpose of this study was to investigate the attitudes toward CAM of the people surveyed. It was hypothesized that younger participants would have more positive attitudes toward CAM than older participants. It was also hypothesized that women and participants with more experience with CAM would hold more positive attitudes.

## **CHAPTER 3**

### **METHODS**

#### **Participants**

Survey results were collected from 89 participants through Amazon Mechanical Turk (MTurk). Of the 89 participants, 2 could not finish the survey because they were under the required age of 18. Of the remaining 87 participants, 8 did not complete any questions on the survey, leaving 79 usable participants. The ages of the participants ranged from 18 to 60 ( $M=32.54$ ), which were split into two age groups (younger participants = 18-29 and older participants = 30-60). There were 33 males, 44 females, and 2 participants who identified as another gender identity. Each participant voluntarily selected to take this survey through MTurk and each participant received 5 cents added to their MTurk account upon completion of the survey.

## **Measures**

**Demographic Information.** Participants were asked to provide their age, gender, and prior experience with CAM.

**Attitudes Toward CAM.** A 20-item survey utilizing a Likert scale was developed, and participants were asked to rate their attitudes about CAM from 1 (I strongly disagree with the statement) to 5 (I strongly agree with the statement). Each statement on the survey was developed to measure a particular aspect related to participants' attitudes toward CAM. Responses were summed for each participant, including reverse scoring for appropriate items.

## **Procedure**

This study was approved by the Marshall University Institutional Review Board. Participants self-selected this survey on the MTurk website, and first answered a question asking if they were over the age of 18. If they answered yes, then they were able to access the rest of the survey. Each participant was provided an electronic copy of the informed consent form. The form advised the participants that they did not have to answer all of the questions and that they could withdraw from the survey at any time without penalty.

# **CHAPTER 4**

## **RESULTS**

### **Descriptive Statistics**

The sums of the scores ranged from 31 to 76 ( $M=55.48$ ,  $SD=9.83$ ), with higher sums indicating more positive attitudes. Of the 79 participants, 64 indicated they had used some type of CAM throughout their lives (81%). When asked about the top three types of CAM, all of the 79 participants reported they had used at least one of them. Twenty-one participants answered

that they had not used any type of CAM in the past month (26.6%). The rest of the responses were between one time the last month and 100 times the last month, with the most frequent responses being one time and two times (nine participants). Thirteen participants reported they had not used any CAM in the past year (16.4%). The range of the remaining answers was one time in the past year to 800 times in the past year, with the most frequent answer being 20 times (seven participants).

### **Main Analyses**

An ANOVA was performed to analyze the effects of age and gender on participants' attitudes toward CAM. Results showed a significant main effect for age,  $F(1,73) = 4.218$ ,  $p < .05$ ,  $\eta_p^2 = .058$ . Younger participants showed less positive attitudes ( $M=53.64$ ) than did older participants ( $M=57.91$ ). There was also a significant main effect for gender,  $F(1,73) = 4.986$ ,  $p < .05$ ,  $\eta_p^2 = .67$ . Females held more positive attitudes toward CAM ( $M=58.10$ ) than did males ( $M=53.45$ ). There was no interaction between the two main effects. A regression was conducted to determine if past experience with CAM could predict current attitudes. No significant results were found,  $F(1,73) = .103$ , ns.

## **CHAPTER 5**

### **DISCUSSION AND CONCLUSION**

CAM usage has increased throughout the years, and as more people are turning to less conventional methods of maintaining good health, research on these alternative methods is vital. Not only is the general population learning more about CAM, but medical schools in the U.S. are beginning to implement CAM courses for physicians, showing that the influence of CAM is increasing in the western world. As more people are using these methods, the attitudes about them are changing. People are learning that CAM treatments have far fewer side effects than

conventional medicines and that utilizing preventative medicine, which many CAM options are, can have a more positive impact on one's life than only relying on curative medicine.

This study aimed to determine if age, gender, and past CAM usage would have an effect on attitudes toward CAM. Based on these results, the hypothesis regarding age was not supported. Our results indicated that older individuals held more positive attitudes toward CAM than younger individuals. As this is inconsistent with other research, it raises some questions. One explanation is the older adults took the survey more seriously, and the younger adults chose random answers to quickly complete the survey. The results being inconsistent with other research could also be a result of the small, unrepresentative sample. The hypothesis stating that individuals with more experience using CAM would hold more positive attitudes was also not supported. However, consistent with the hypothesis and most of the cited literature, female participants held more positive attitudes toward CAM than did male participants.

There are two major limitations in this study. The small sample size is concerning because it may not be representative of the general population. A larger incentive may have resulted in more individuals being willing to take the survey. Another limitation of this study is the use of a non-standardized survey. The survey was created by generating questions that I believed would accurately measure peoples' attitudes toward complementary and alternative medicine; however, the survey was not empirically validated.

These results, and results of studies similar to this one, can add to the knowledge about CAM and give patients and physicians information about other treatment options. Many patients may not be aware that these types of treatments exist, much less that there is evidence that they can be effective in reducing symptoms. When studies are conducted about CAM treatments, whether their efficacy is being studied or attitudes toward them are being examined, more

awareness can be raised about CAM in general. With the results from this study, physicians and psychologists can see that women are more likely to be open to using a form of CAM for treatment. Therefore, they could present CAM as an option for those patients. With men, however, the physicians and psychologists may have to provide additional education. In regards to educating health professionals, these results show that it is very important for all health care professionals to know about CAM options. Health care professionals need to be well-informed about CAM options to be able to suggest those options to the patients who are more open to using alternatives to conventional medicine. Medical professionals also need to be well educated so they can educate others who are less open to trying anything other than conventional options.

Patients need to be exposed to the results of studies such as this one as well, so they are aware of all their options, not just the conventional medicine options. If patients know that CAM options are readily available to them and that many other people have positive attitudes toward them, their own attitudes could potentially be changed.

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## APPENDIX A



March 9, 2016

Penny Koontz, PsyD  
Psychology Department

RE: IRBNet ID# 873012-1

At: Marshall University Institutional Review Board #2 (Social/Behavioral)

Dear Dr. Koontz:

**Protocol Title:** [873012-1] Attitudes Toward Complementary and Alternative Medicine

**Expiration Date:** March 9, 2017

**Site Location:** MU

**Submission Type:** New Project APPROVED

**Review Type:** Exempt Review

In accordance with 45CFR46.101(b)(2), the above study and informed consent were granted Exempted approval today by the Marshall University Institutional Review Board #2 (Social/Behavioral) Designee for the period of 12 months. The approval will expire March 9, 2017. A continuing review request for this study must be submitted no later than 30 days prior to the expiration date.

This study is for student Miranda Cobb.

If you have any questions, please contact the Marshall University Institutional Review Board #2 (Social/Behavioral) Coordinator Bruce Day, ThD, CIP at 304-696-4303 or [day50@marshall.edu](mailto:day50@marshall.edu). Please include your study title and reference number in all correspondence with this office.

## APPENDIX B

**The following statements are related to Complementary and Alternative Medicine (CAM). When responding to these statements, please consider CAM to include deep breathing, yoga, and natural products.**

**Please indicate the degree to which you agree with the following statements from 1 (I strongly disagree with this statement) to 5 (I strongly agree with this statement).**

		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
	<b>Question</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1	CAM is just as effective at treating physical ailments as medications prescribed by medical doctors.					
2	Positive thinking can assist in improving minor illnesses.					
3	Symptoms of psychological disorders such as depression and anxiety can be improved by the practice of yoga.					
4	CAM only works because of the placebo effect (people believe they will improve, so they do).					
5	CAM is better for your body than pharmacological drugs.					
6	CAM should only be used after conventional medicine has shown little benefit.					
7	A person's psychological state influences his or her physical health.					
8	Yoga, deep breathing, or natural products can improve the symptoms of psychological					

	conditions such as depression and anxiety.					
9	CAM has fewer side effects than conventional medicines.					
10	A strong mind-body connection helps facilitate healing and strengthening of the immune system.					
11	Regular practice of yoga can do nothing for psychological conditions such as depression and anxiety.					
12	I will not use CAM until it is subject to more rigorous scientific testing.					
13	A person's spiritual beliefs play an important role in the healing process.					
14	Using alternative methods, the body has the ability to heal itself without pharmacological drugs.					
15	The physician who uses CAM will have more success with helping a patient's medical concern.					
16	Physicians should counsel patients on good nutritional habits to prevent chronic illness.					
17	CAM should be used in conjunction with conventional medicines for the best patient outcome.					
18	People with psychological conditions, such as depression and anxiety, should implement a form of yoga practice or deep					

	breathing exercises into their everyday lives to improve their symptoms.					
19	Using natural products can improve psychological health.					
20	Health encompasses more than just physical aspects-- mental and spiritual aspects also need to be taken into consideration for wellness.					

	Question	
1	Have you ever used any type of CAM?	
2	Have you ever used any of the following types of CAM: natural products, deep breathing, or yoga?	
3	How many times have you used any type of CAM in the past month?	
4	How many times have you used any type of CAM in the past year?	
5	How many times have you used any of the following types of CAM: natural products, deep breathing, or yoga in the past month?	
6	How many times have you used any of the following types of CAM: natural products, deep breathing, or yoga in the past year?	
7	How many times have you suggested that someone else use CAM?	

**Age:** \_\_\_\_\_

**Gender:**

Male      Female      Transgender      Other Identity

## VITA

### Miranda Lea Cobb

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#### Education

Marshall University	M.A. Psychology	January 2014-present
Marshall University	B.A. Psychology	January 2013-December 2015

#### Work Experience

State of West Virginia <b>Child Protective Services Worker</b>	October 2016-present
Starbucks <b>Shift Supervisor</b>	January 2016-November 2016
Marshall University <b>Resident Advisor</b>	January 2014-November 2015
Starbucks <b>Barista/Barista Trainer</b>	October 2013-November 2016

#### Honors/Organizations

Psi Chi	January 2016-present
MEDLIFE	January 2015-present
National Residence Hall Honorary	August 2014-November 2015
Marshall University's Dean's List	May 2013-present