College-age students' attitudes toward essential oils, alternative medicines, and modern medicine

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COLLEGE-AGE STUDENTS’ ATTITUDES TOWARD ESSENTIAL OILS, ALTERNATIVE MEDICINES, AND MODERN MEDICINE

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Date  Dr. Jessica Moon, Director, University Honors Program
Abstract

The purpose of this pilot study was to examine the attitudes of college-age students on the use of essential oils, alternative medicines, and modern medicine. Essential oils are natural oils that contain the essence/fragrance of a plant and are often used for cleaning purposes (e.g., in soaps, detergents, disinfectant sprays) and therapeutic purposes (e.g., relieving aches and pains, calming a person, healing illnesses and injuries, improving mood). Although essential oils are primarily used in alternative medicine, some oils have also been used on an experimental basis in modern medical settings (Corner et al., 1995).

College-age students took part in an online survey aimed at determining their attitudes toward modern medicine, alternative medicine, and the use of essential oils for health purposes. Questions of the study included (1) what are the characteristics of individuals likely to use essential oils? (2) how do attitudes toward essential oils compare to attitudes toward modern medicine? and (3) how do these attitudes compare to attitudes toward alternative medicine? It was hypothesized that more female students would have used essential oils than male students, students in science-related fields would use essential oils less than students in other disciplines, and individuals who have a great belief in alternative medicines would be more accepting of the use of essential oils for health benefits than individuals who have a greater belief in modern medicine. Due to a small sample size (22 students) comprised mostly of female participants (18), these hypotheses could not be formally tested. However, informal results indicated that college-age students find modern medical techniques (vaccines, medications) to be safe and effective. In addition, results indicated that approximately half of college-age students find essential oils to be safe and effective. Lastly, attitudes towards alternative medicines were
indifferent, with the majority of students answering neutrally when asked about the safety and efficacy of different alternative therapies (reiki, meditation, hypnosis.)

*Keywords:* essential oils, modern medicine, alternative medicine
Introduction

Essential oils are natural oils that contain the essence/fragrance of a plant. They are often used by being ingested, inhaled, or applied to the skin, though they have also been used for cleaning purposes. While they are not currently considered a part of modern medicine, they are a form of alternative therapy that is used to provide health benefits. In addition, they have been used experimentally in modern medical settings to assist in anxiety relief (Corner et al., 1995).

Understanding the attitudes of individuals toward modern medicine, alternative medicine, and the use of essential oils for medical purposes provides insight into concerns with modern medical techniques, highlights the attraction to certain non-tested, non-regulated treatment options, and helps illuminate potential ways to help individuals develop a trust in modern medicine. With the current COVID-19 pandemic, there have been many false cures advertised and there has been much pushback against modern medical recommendations, including getting vaccinated and wearing facemasks. It is important to understand the attitudes of college students regarding modern medicine and alternative medicines to better understand how they contribute to the healthcare system.

This pilot study was designed to provide information regarding the attitudes of college-age students toward the use of essential oils, alternative medicines, and modern medicine. The survey used asked questions regarding the participants’ opinions on the safety and efficacy of a variety of treatments as well as their personal willingness to use or recommend the therapy to a friend. This study expands on previous studies by focusing specifically on college-age students. Prior research addressed in the following section, led to the formation of three main hypotheses for this study.
Literature Review

Previous studies have examined the attitudes of individuals with regard to essential oils, alternative medicines (medical treatments that are not considered orthodox in the medical profession), and complementary therapies (medical therapies or techniques that do not meet scientific requirements to be considered part of modern medicine, but are often used alongside modern medical techniques to provide health benefits). These studies have examined the attitudes of physicians, medical students, and individuals with a variety of illnesses.

Essential Oil Usage

One study conducted by Goodier et al. (2019), focused on the use of essential oils. The study was conducted with Minnesota State Fair attendees over the age of 18 who were asked to respond to a 17-question questionnaire about essential oil usage. They found that younger females with higher education were the most likely to use essential oils. The study also showed that there was high interest in natural products among all participants. For individuals using essential oils, the most common ailments were musculoskeletal, emotional, upper respiratory, and skin conditions. The reasons participants gave for using essential oils included a desire to use alternative treatments, the idea that essential oils were safer than conventional treatments, and the ineffectiveness of conventional treatments. For users of essential oils, over half reported using the oils by diffusing them into the air.

Alternative and Complementary Medicine Usage

A study conducted by Su and Li (2011), examined trends in the use of complementary and alternative medicine among Americans. This study utilized the National Health Interview Survey conducted by the National Center for Health Statistics. The results from the 2002 study were compared to the results of the 2007 survey. It should be noted that the 2002 survey
contained questions about 27 alternative therapies while the 2007 survey included questions about 36 alternative therapies. Though this is the case, the study focused on 15 major complementary and alternative treatments (chiropractic care, massage, homeopathy, acupuncture, energy healing therapy/Reiki, hypnosis, naturopathy, biofeedback, folk medicine, Ayurveda, chelation therapy, relaxation techniques, yoga-taiichi-qigong, special diets, and prayer for health reasons.) They found that there was a significant increase in the use of alternative medicines from 2002 to 2007. They also found that there were significant racial differences in the use of alternative medicines. Non-Hispanic white individuals used alternative medicine more often than other groups and experienced the most rapid increase in use. Gender differences were also noted. Women tended to use alternative and complementary treatments more often than men. The study also suggested that the increase in complementary and alternative medicine use could be attributed to the increase in cost and decrease in availability of modern medicine.

Another study by Burke et al. (2011), examined attitudes toward traditional medicine. This study was conducted at two sites: one in the United States and the other in China. The participants were all over the age of 18 and were asked to complete a 28-question questionnaire to collect information regarding demographics, health status, attitudes toward traditional medicine, and the use of traditional medicine. Twenty-five of the questions were close-ended and 3 were open-ended. The survey used in this study was based on a longer 88-question questionnaire developed by the first author. This study received the participation of 127 people in the United States and 128 people in China. The study found that participants in the United States reported greater satisfaction with traditional medicine whereas participants in China reported greater satisfaction with allopathic medicine. In the United States, the common reasons provided for liking traditional medicine were that it was holistic, balanced, natural, effective, was
delivered in a caring manner, and produced few side effects. In the United States, the common reasons for disliking traditional medicine were that there was discomfort with needles, the taste of herbs, and lack of insurance coverage. In China, common reasons that individuals liked traditional medicine were that it was holistic, balanced, natural, effective, that it cured the root cause, and that it produced few side effects. The common reasons for disliking traditional medicine in China were that the treatments were slow to take effect, there was an inconvenience with cooking the herbs, and the taste of the herbs. In addition, the study found that there was greater use of traditional medicines among women and middle-aged individuals. In the United States, race also played a role. White individuals were the most likely to use these therapies followed by Asian individuals. In China, all of the participants were Asian, so race did not play a role.

The differences in satisfaction with traditional medicine could be explained by a study conducted by Vincent and Furnham in 1996. In the study, 268 individuals seeking complementary treatments (homeopathy, osteopathy, or acupuncture) were approached in the waiting room and asked to fill out a survey rating a series of 20 reasons for seeking complementary medicines rather than orthodox medicine based on how applicable that reason was for their own decision to seek a complementary treatment. General observations made from the study include the fact that most individuals seeking a complementary therapy suffered from musculoskeletal issues and that 40% were educated to degree level. In addition to these basic observations, the study revealed that individuals often used complementary therapies after orthodox treatments were ineffective. The study also indicated that patients enjoyed a greater sense of control than they experienced when using complementary therapies. Additional reasons included the fact that these complementary therapies treated the whole person, and they believed
these treatments would be more effective than orthodox treatments. This study found that individuals were unlikely to attribute their decision to use a complementary treatment to the cost effectiveness of the complementary treatment.

A study conducted by Astin (1998) also examined reasons individuals sought alternative therapies. The study utilized a mail survey that asked questions about the use of alternative therapies, health attitudes and beliefs, views and experiences with conventional medicines, perceived risks and rewards of alternative therapies, political beliefs, and worldview. The study was conducted through National Family Opinion. Fifteen hundred people were selected to complete the study with 1035 individuals actually completing the questionnaire. The study found that 40% of respondents had used some form of alternative medicine in the past year and that the most common treatments were chiropractic, change in diet, exercise/movement, and relaxation. The study also found that the most common reasons for seeking alternative treatments were chronic pain, anxiety, chronic fatigue syndrome and “other health conditions,” sprains/muscle strains, addictive problems and arthritis, and headaches. This study found that white individuals were most likely to use alternative therapies. Other results showed that only 4.4% of the sample relied primarily on alternative care. It was noted that a distrust of conventional physicians and hospitals, a desire for control over health matters, a dissatisfaction with conventional practitioners, and a belief in the importance of an individual’s experiences were all strong predictors in the logistic regression used to determine whether individuals preferring different forms of care had different profiles.

There was also a study by Barnes et al. (2004) that examined the reasons individuals use alternative therapies. They surveyed 31,044 adults over the age of 18 using computer-assisted personal interviews. This study was conducted using the Alternative Health/Complementary and
Alternative Medicine supplement, the Sample Adult Core Component, and the Family Core Component of the 2002 National Health Interview Survey conducted by the Centers for Disease Control. This survey consisted of questions about 27 types of complementary and alternative therapies commonly used in the United States. They found that 62% of individuals used a form of complementary or alternative therapy in the last year when prayer for health reasons was included and 36% of individuals used a form of complementary or alternative therapy when prayer for health reasons was not included. The most common complementary and alternative therapies were prayer for oneself, prayer by others for oneself, natural products, deep breathing exercises, participation in a prayer group for oneself, meditation, chiropractic care, yoga, massage, and diet-based therapy. Complementary and alternative medicine was most often used to treat back issues, head or chest colds, neck issues, joint pain, anxiety, and depression. Most individuals who used a complementary or alternative therapy did so because they thought it would be effective when combined with conventional medicine and they believed it would be interesting to try. The study also found that females were more likely to use complementary or alternative therapies than males and that older adults were more likely to use these therapies than younger adults. Though this is the case, the study also noted that the age-related differences were linked to the inclusion of prayer as a complementary or alternative therapy. This study showed that Black adults were most likely to use mind and body therapies including prayer for health purposes whereas Asian adults were more likely to use complementary and alternative therapies when prayer and megavitamin therapies were excluded. This study also showed that individuals living in urban areas were more likely to use alternative therapies than individuals living in rural areas, and adults who were former smokers were more likely to use alternative therapies than
nonsmokers and current smokers. Individuals hospitalized in the previous twelve months were more likely to use alternative therapies when prayer was included than non-hospitalized adults.

Another study by Barnes et al. (2008) examined the use of alternative therapies by children. They collected data from the Adult and Child Complementary and Alternative Medicine supplements, the Sample Adult and Sample Child Core, and the Family Core components of the 2007 NHIS, as well as the Adult Complementary and Alternative Medicine supplement, the Sample Adult Core, and the Family Core components of the 2002 NHIS conducted by the Centers for Disease Control and Prevention’s National Center for Health Statistics. The 2002 survey collected information from 36,161 households and the 2007 survey collected information from 29,266 households. The study found that 4 out of 10 adults used complementary and alternative medicine in the previous year and that the most common therapies were nonvitamin, nonmineral natural products and deep breathing exercises. The study also showed that 1 out of 9 children used alternative medicine in the previous year with the most common forms being nonvitamin, nonmineral natural products and chiropractic manipulation. The children of parents who used alternative therapies were five times as likely to use these therapies as children whose parents did not use alternative medicine. In both children and adults, cost of conventional care played a role in alternative therapy use. If cost of conventional care was an issue, then alternative therapy was used more. If cost of conventional care was not an issue, then alternative therapy was used less. The study showed that American Indian or Alaskan Natives were the most likely to use this form of treatment followed by white individuals.

**Significance**

Overall, these studies show that there tends to be a significant sex difference in the use of alternative therapies and essential oils. Several of these studies also found a significant difference
in alternative therapy use among different races and ethnicities. These studies also provided insights into the reasons that individuals turn to alternative therapies, what ailments alternative therapies are used to treat, and how attitudes toward alternative therapies compare to attitudes toward conventional medical practices.

Though there is a great deal of research concerning the attitudes of individuals regarding essential oils and alternative medicines, most of these studies are over ten years old. In addition, many of these studies focus on individuals with specific ailments or medical degrees. The current study is designed to provide new information regarding current attitudes, a more specialized examination of the attitudes of college students, and more information regarding medical views amidst a pandemic. By learning about the attitudes and motives of individuals concerning modern medicine and alternative medicine, including the use of essential oils, better methods of combatting medical misinformation may be developed.

**Current Study**

**Hypotheses**

Based on previous research, it is expected that more females than males will have used essential oils and females will use them more often than males.

It is also expected that students in science related fields will use essential oils less than individuals in other disciplines.

Another trend expected is that individuals who believe more in alternative medicines will be more accepting of the use of essential oils than individuals who believe more in modern medicine.
Method

Participants

Participants were recruited through an email to students in the University of Northern Iowa’s honors program. These students did not receive any course credit for their time. There were 22 participants in the study, one of which declined to complete the survey. There were 3 male and 18 female participants, ranging in age from (18-22). Participants were Hispanic, Latino, or Spanish origin (1) or White or European American (16). All participants reported themselves to be in fair to excellent health. Participants were from a broad range of disciplines including: art (10%), biological sciences (19%), business (14%), communication sciences and disorders (5%), computer science (5%), English (19%), mathematics (10%), political science (5%), and social and behavioral sciences (14%). In addition, all participants had been exposed to the term essential oils prior to completing the survey.

Materials

This project used a questionnaire that asked a series of questions of varying types inspired by previous surveys (see Appendix A). The subjects of these questions included essential oils, alternative medicines, and modern western medicine. These questions consisted of general attitude questions such as “Rate the degree to which you agree/disagree with the following statements: Essential oils are effective at preventing disease,” personal reflection questions such as “Rate the degree to which you agree/disagree with the following statements: I would recommend using essential oils for healing purposes to a friend,” and general information questions such as “Have you ever used essential oils?” The questions provided insights into uses and attitudes toward the use of a variety of health-related therapies.
Procedure

Prior to beginning this study, IRB approval was obtained. The study was advertised as an Honors Thesis project examining the attitudes of college-age students on topics including essential oils, alternative medicines, and modern Western medicine. The study was advertised to students in the university's honors program, noting that they would not receive course credit for their participation in the study. By advertising the study to this group, the survey received attention from students across a wide range of disciplines and stages in their college careers. The study was also advertised to students in introductory psychology classes, noting that they would receive course credit for their participation in the study. However, no data were collected from this group because no one signed up for the survey.

The survey was conducted online to allow for greater schedule flexibility. Prior to taking the survey, participants were required to provide informed consent in order to proceed to the survey. Participants then answered a series of questions about their attitudes toward essential oils, alternative medicines, and modern medicine.

Results

Because the sample size was so small (22 students) and consisted of mainly female students (18), it was not possible to test the three main hypotheses using formal statistical methods. However, it is possible to provide some preliminary descriptive statistics.

This pilot study showed that 62% of participants had used essential oils themselves. Of those participants, 85% of them used oils via inhalation. Amongst users, peppermint (77%) and lavender (69%) were the most commonly used oils. Seventy-seven percent of individuals using oils did so for anxiety and stress relief.
When asked about attitudes concerning essential oils, 62% of participants stated that they thought essential oils were safe to use and 52% thought that they were effective complements to modern medicine. However, 71% did not think that essential oils were an effective alternative to modern medicine. When asked about using essential oils in place of medication, 81% stated they would not use essential oils in place of prescription medications and 71% stated they would not use essential oils in place of over-the-counter medications.

Participants were then asked to answer a series of questions regarding their attitudes toward modern medical techniques. The results showed that 86% of participants believed vaccines to be safe and trusted their doctor to provide them with the best options for treatment. Seventy-six percent of respondents stated that the CDC is an organization to be trusted when it comes to medical care, and 81% thought that the FDA is an organization to be trusted when it comes to medications. Participants were also asked questions about determining the efficacy of a medication. Eighty-one percent thought that double-blind studies are important in determining the efficacy of a treatment and 86% thought that the Placebo Effect influenced the perceived effectiveness of a medication. Overall, participants had the strongest responses (the most “strongly agree” or “strongly disagree” responses) to questions concerning modern medicine.

Lastly, participants were asked questions regarding the safety, efficacy, and their willingness to use a series of alternative therapies. This section of questions provided the greatest number of neutral responses (the most “neither agree nor disagree” responses) from participants.

Overall, the results showed that there was only a slight difference in essential oil usage between participants in science (50%) and non-science (77%) related fields, and responses tended to show support of modern medical techniques.

**Discussion**
Before collecting any data, I expected that more females than males would have used essential oils. The data collected could not be used to support or rebut this hypothesis because there were only three male participants, which was not enough to provide a usable result. It was also expected that students in science related fields would use essential oils less than individuals in other disciplines. There was only a slight difference in essential oil usage between students in science and non-science related fields. However, due to the small sample size, the data could not provide a significant result. Another trend expected was that individuals who believed more in alternative medicines would be more accepting of the use of essential oils than individuals who believed more in modern medicine. However, due to the small sample size and abundance of neutral answers in the alternative therapies section, no trend was detected.

Limitations

Since this was a pilot study, it utilized a very small sample size and participants were all from the University of Northern Iowa’s honors program. This resulted in a lack of demographic diversity, which meant that the data collected was not representative of the average college-age student. This also meant that associations identified in previous studies such as gender differences in alternative therapy use could not be identified as there were not enough data to determine these relationships.

Future Research

Previous studies into the use of alternative medicines and essential oils showed a distinct gender difference indicating that women tend to use alternative therapies more than men. Previous studies also indicated differences in use among individuals of different racial backgrounds, educational backgrounds, and ages. Future studies focused on college students could better explore these trends in this specific population by having a larger, more
representative group of participants. In addition, all participants in this study were honors students. It would be beneficial to have studies that focus on all college students rather than just a particular subset of the population. To accomplish these goals, future research could collect data from more college campuses. Knowing more about college-age students’ attitudes could provide insight into how the use of essential oils, alternative medicines, and modern medicine is shifting.

**Conclusion**

Modern medicine provides treatment and prevention options for a wide variety of illnesses and diseases. However, alternative therapies, such as the use of essential oils for health purposes, are still used. This pilot study was designed to examine the attitudes of college-age students towards the use of alternative medicine and essential oils, as well as their attitudes towards modern medicine. While some research has been conducted examining the use of essential oils and alternative medicines, more research is needed to better understand the current views on these therapies now that a pandemic has taken place. In addition, very little research has been conducted focusing on college-age students. This pilot study provides the foundation for a larger scale study that could be conducted to better understand the attitudes of this population. Due to the small sample size, the results of this study could not be used to establish gender differences in essential oil use. In addition, there was only a slight difference in essential oil usage between participants in science and non-science related fields. Participants’ responses tended to show support for modern medical techniques. While the data revealed that most participants were receptive to using essential oils for medical purposes, it also revealed that most participants were unwilling to use them in place of modern medical treatments. More information regarding the attitudes of college-age students would be beneficial as information regarding the attitudes this group is sparse. These data could provide information regarding how
the use of essential oils, alternative medicines, and modern medicine are changing with time and provide insight into the future of the healthcare system.
References


Appendix A

Documents of Informed Consent

Honors Update Email

HUMAN PARTICIPANTS REVIEW INFORMED CONSENT (HONORS)

We are conducting a research study at the University of Northern Iowa about student attitudes toward essential oils, modern medicine, and alternative medicine. This study involves completing an online survey, which will take about 15 minutes. The study is voluntary and you can choose not to answer some or all of the questions. The study risks are minimal. There will be no compensation for your time, and there are no direct benefits to you, but we believe the study will help us better understand college-age students’ attitudes toward essential oils, modern medicine, and alternative medicine.

This survey is confidential. While we will not request your name, we will ask for some demographic information (e.g. gender, major, age, race, etc.). Because the survey is on the internet, we cannot guarantee that the data will not be intercepted by others, although this seems unlikely. After we receive your survey, we will separate the survey sections and store the demographic information in a different file than the survey responses, and only combine those data during analysis. Individual results will never be shared with anyone. Grouped results will be shared in articles and presentations.

If you have questions about the study, please contact the lead researcher, Taylor Brown, at browntbv@uni.edu. If you have questions about the rights of research participants, contact the UNI IRB Administrator at lisa.ahern@uni.edu. If you are interested in completing the survey, click “Yes” below. If not, you may simply close your browser.

Participant Pool through SONA

HUMAN PARTICIPANTS REVIEW INFORMED CONSENT (PARTICIPANT POOL)

We are conducting a research study at the University of Northern Iowa about student attitudes toward essential oils, modern medicine, and alternative medicine. This study involves completing an online survey, which will take about 15 minutes. The study is voluntary and you can choose not to answer some or all of the questions. The study risks are minimal. You will receive course credit for your time. We believe the study will help us better understand college-age students’ attitudes toward essential oils, modern medicine, and alternative medicine.

This survey is confidential. We will ask for some demographic information (e.g. gender, major, age, race, etc.) and then for your responses to the rest of the questions. Because the survey is on the internet, we cannot guarantee that the data will not be intercepted by others, although this seems unlikely. After we receive your survey, we will separate the survey sections and store the
demographic information in a different file than the survey responses, and only combine those data during analysis. Individual results will never be shared with anyone. Grouped results will be shared in articles and presentations.

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Appendix B

Survey:

Demographics:

1. What is your current gender identity?
   a. Male
   b. Female
   c. Non-binary / third gender
   d. Prefer not to say

2. What is your current age in years? ________________

3. Which of these categories best describes you?
   a. American Indian or Alaska Native
   b. Asian or Asian American
   c. Black or African American
   d. Hispanic, Latino, or Spanish origin
   e. Native Hawaiian or Pacific Islander
   f. White or European American
   g. Some other race, ethnicity, or origin, please specify:
      __________________________________________________
   h. Prefer not to answer

4. What is/are your undergraduate major(s): ______

5. What is/are your undergraduate minor(s): ________

6. What certificate are you pursuing (if applicable): __________

7. What graduate degree are you currently pursuing (if applicable): ________
8. How would you describe your current health status?
   a. Poor
   b. Fair
   c. Good
   d. Very Good
   e. Excellent

Survey Questions:

1. Have you ever heard of essential oils? (yes/no)

2. How have you heard of essential oils? (select all that apply)
   a. I have not heard of essential oils.
   b. Family
   c. Friends
   d. School
   e. Job
   f. Advertisements
   g. Other: ______

3. What are essential oils?
   a. Oils that are essential to a healthy life.
   b. Natural oils that contain the essence/fragrance of a plant.
   c. Chemically engineered oils designed to mimic the scent of a plant.
   d. None of the above.
   e. Not sure.

4. Do you know anyone who has used essential oils? (yes/no)
5. Have you ever used essential oils? (yes/no)

6. How have you used essential oils? (select all that apply)
   a. I have not used essential oils.
   b. Topically
   c. Aromatically/Inhalation
   d. Ingestion

7. Why have you used essential oils? (select all that apply)
   a. I have not used essential oils.
   b. Flavor food
   c. Air freshener
   d. Pain
   e. Itchiness
   f. Rash
   g. Blemish
   h. Swelling
   i. Anxiety/stress relief
   j. Improve mood
   k. Wound healing
   l. Other: _________

8. What oils have you used? (select all that apply)
   a. None
   b. Lavender
   c. Peppermint
d. Lemon

e. Orange

f. Frankincense

g. Tea tree

h. Eucalyptus

i. Lemongrass

j. Chamomile

k. Patchouli

l. Marigold

m. Mandarin

n. Ylang-ylang

o. Basil

p. Clove

q. Bergamot

r. Oregano

s. Grapefruit

t. Blend of several oils: _________

u. Other: _________

9. What products have you used that contain essential oils? (select all that apply)

  a. None

  b. Deodorant

  c. Shampoo/conditioner

  d. Cologne/perfume
10. Rate the degree to which you agree/disagree with the following statements:

(1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree)

**Essential Oils:**

a. Essential oils are effective at preventing disease.

b. Essential oils are effective at treating many ailments and diseases.

c. Essential oils are effective at cleaning and disinfecting surfaces.

d. Essential oil purity is directly related to their effectiveness.

e. Essential oils are safe to use.

f. Essential oils are effective alternatives to modern western medicine.

h. Essential oils are effective complements to modern western medicine.

i. I would recommend using essential oils for healing purposes to a friend.

j. I would recommend using essential oils for cleaning purposes to a friend.

k. I would be willing to use essential oils in place of prescription medications.

l. I would be willing to use essential oils in place of over-the-counter medications.

m. I would be willing to use essential oils as a complement to modern medicines.
n. I would be willing to use essential oils to affect my mood.

o. I would be willing to use essential oils to relieve feelings of anxiety.

p. I would be willing to use essential oils for cleaning purposes

q. I would be willing to use essential oils in place of disinfectants.

r. I would be willing to use essential oils by ingesting them.

s. I would be willing to use essential oils by inhaling them.

t. I would be willing to use essential oils by applying them topically.

u. There are diseases/ailments that essential oils cannot cure.

**Modern Medicine Practices:**

a. Vaccines are effective at preventing disease

b. Vaccines are safe to use

c. Masks are an effective method of preventing the spread of airborne diseases (such as COVID-19)

d. Social distancing is effective at preventing the spread of disease (such as COVID-19)

e. Over-the-counter medications are effective treatment options for a variety of ailments.

f. Over-the-counter medications are safe treatment options for a variety of ailments.

g. ADHD medications are effective.

h. ADHD medications are safe.

i. Anxiety/depression medications are effective.

j. Anxiety/depression medications are safe.

k. Modern medications are overused/overprescribed.
1. Doctors are only interested in prescribing medication because they receive more money for doing so.

m. I trust medical doctors to provide me with the best options for my treatment.

n. The CDC is an organization that should be trusted when it comes to medical care.

o. The FDA is an organization that should be trusted when it comes to medications.

p. Double-Blind studies are important and for determining the efficacy of medical treatments.

q. The Placebo Effect influences the effectiveness of a treatment.

r. I believe that lifestyle choices influence medical conditions.

s. There are diseases/ailments that modern western medicine cannot cure.

**Other Alternative Medicine Practices**

a. Acupuncture provides health benefits.

b. Acupuncture is a safe practice.

c. I would be willing to use acupuncture for health-related purposes.

d. Reiki provides healing benefits.

e. Reiki is a safe practice.

f. I would be willing to use Reiki for health-related purposes.

g. Hypnosis provides health benefits.

h. Hypnosis is a safe practice.

i. I would be willing to use Hypnosis for health-related purposes.

j. Meditation provides health benefits.

k. Meditation is a safe practice.

l. I would be willing to use meditation for health-related purposes.
m. Homeopathy provides health benefits.

n. Homeopathy is a safe practice.

o. I would be willing to use homeopathy for health-related purposes.

p. Herbalism provides health benefits.

q. Herbalism is a safe practice.

r. I would be willing to use herbalism for health-related purposes.

s. Natural products are better than non-natural products.

11. What alternative medicine practices have you used? (select all that apply)

   a. None
   b. Acupuncture
   c. Reiki
   d. Hypnosis
   e. Meditation
   f. Homeopathy
   g. Herbalism
   h. Other: __________

12. Rank the importance of the following factors in making healthcare decisions.

   a. Cost of treatment
   b. Scientific studies on the efficacy of treatment
   c. Doctor recommendation of the treatment
   d. Personal accounts of the treatment
   e. Possible side effects of the treatment
   f. Family/friends opinions of the treatment
Table 1

*Scientific vs. Non-scientific Disciplines*

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<th>Females</th>
<th>Males</th>
<th>Total</th>
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<td>75%</td>
<td>25%</td>
<td>38%</td>
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<td></td>
<td>(6)</td>
<td>(2)</td>
<td>(8)</td>
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<tr>
<td><strong>Non-scientific</strong></td>
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<td>8%</td>
<td>62%</td>
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<td>(12)</td>
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Glossary

**Allopathic Medicine** – medical treatments prescribed by doctors and other healthcare professionals; an archaic synonym for modern medicine

**Alternative Medicine** - medical treatments that are not considered orthodox in the medical profession

**Aromatherapy** - the use of aromatic compounds for psychological or physical benefits

**Complementary Medicine** - medical therapies or techniques that do not meet scientific requirements to be considered part of modern medicine, but are often used alongside modern medical techniques to provide health benefits

**Essential Oil** - natural oils that contain the essence/fragrance of a plant

**Modern Medicine** - any medical treatments that are considered orthodox in the medical profession

**Traditional Medicine** - traditional healing techniques developed over centuries with origins in folk beliefs